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ABSTRACT

The four papers contained in this volume were presented at the August 1994 meetings of the American Statistical Association as a session titled, "Public Policy and Data Comparability: New Interest in Public Library Data." The first paper, "Public Library Statistics: Two Systems Compared" (Mary Jo Lynch), describes two systems that collect data on public libraries. The Federal-State Cooperative System for Public Library Data (FSCS) is part of the National Center for Education Statistics (NCES) and is the most comprehensive data system. The Public Library Data Service (PLDS) is part of the Public Library Association (PLA), one of the specialized divisions of the American Library Association. The second paper, "Counting Public Libraries in the United States" (E. Walter Terrie), looks at what a public library is, explores issues surrounding determining the actual number of public libraries by type during FY 1992, and includes maps of the United States showing distribution of libraries and library services. The third paper, "A Study in Library Structure and Organization and Their Relationship to the Census of Governments" (Stephen D. Owens), concludes with recommendations for easing the problems of identification, classification, and consistency that are inherent with the collection and reporting of library statistics. The final paper, "Evaluating Coverage in the Public Library Statistics Program" (David Kellerman), addresses two general questions: (1) Given the definition of public libraries, how accurate is the coverage in the Public Library Statistics; and (2) How many libraries exist, but fall outside the scope of the definition and are therefore excluded from coverage? (SWC)

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NATIONAL CENTER FOR EDUCATION STATISTICS

Working Paper Series

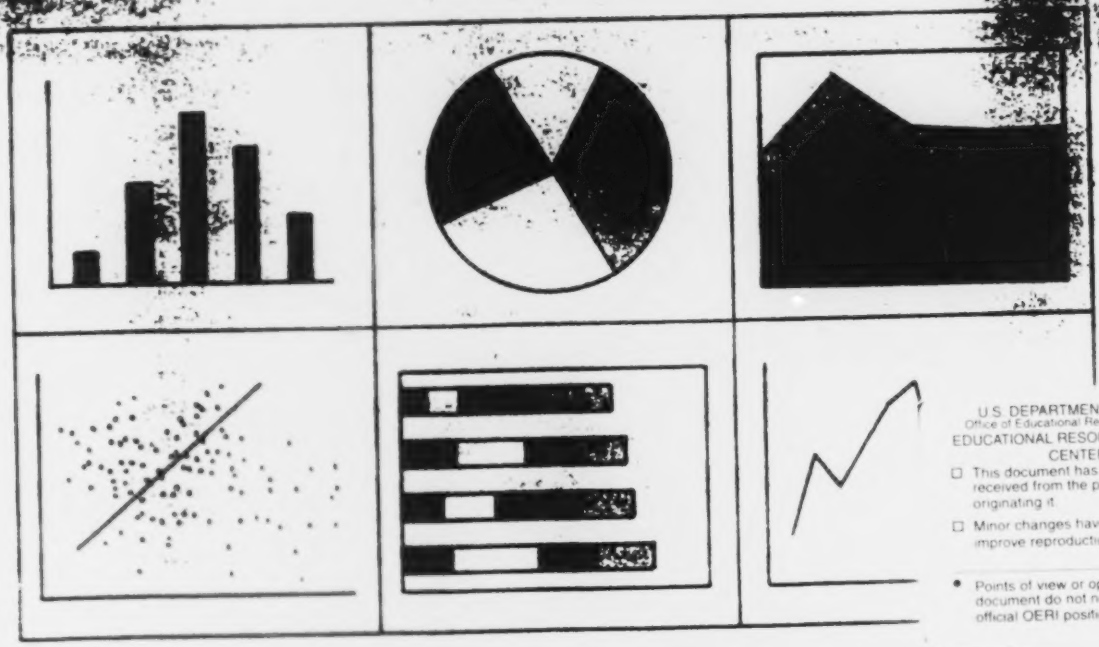
Data Comparability and Public Policy:

New Interest in Public Library Data

Papers Presented at Meetings of
The American Statistical Association

Working Paper No. 94-07

November 1994



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Data Comparability and Public Policy:

New Interest in Public Library Data

Papers Presented at Meetings of
The American Statistical Association

Working Paper No. 94-07 November 1994

Contact: Carrol Kindel
Special Surveys and Analysis Branch
(202) 219-1588

U.S. Department of Education
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Sharon P. Robinson
Assistant Secretary

National Center for Education Statistics
Emerson J. Elliott
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"The purpose of the Center shall be to collect, analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

November 1994

Foreword

The four papers contained in this volume were presented at the August 1994 meetings of the American Statistical Association as a session titled, "Public Policy and Data Comparability: New Interest in Public Library Data." The session was chaired by Paul D. Plachon, Associate Commissioner for Elementary/Secondary Education Statistics at the National Center for Education Statistics (NCES). It was organized by Carrol Kindel, Chief, Library Statistics Unit at NCES. An introduction to the papers is provided by John G. Lorenz, who served as discussant for the session.

Table of Contents

Foreword		iii
Table of Contents		iv
Introduction	*John G. Lorenz*	
Public Library Statistics: Two Systems Compared	*Mary Jo Lynch*	
Counting Public Libraries in the United States	*E. Walter Terrie*	
A Study in Libary Structure and Organization and Their Relationship to the Census of Governments	*Stephen D. Owens*	
Evaluating Coverage in the Public Library Statistics Program	*David Kellerman*	

Introduction
by
John G. Lorenz, Coordinator
Library Statistics Program
U.S. National Commission on Libraries and Information Science

In many ways, the four papers presented at the 1994 Conference of the American Statistical Association, and compiled in this volume, exemplify a renaissance in the development of a national library statistics program. That program had its rebirth as recently as 1988 with the passage of the Hawkins-Stafford Act, P.L. 102-297, resulting in an amendment to the U.S. Department of Education's General Provisions Act sproviding for the collecting and disseminating statistical information on libraries, collecting data from libraries, developing and supporting a cooperative system of annual data collection for public libraries, and obtaining data on libraries, including school libraries, and their resources through the Schools and Staffing Survey (SASS).

From an historic perspective, it is interesting to note that the basic purpose for the establishment of the U.S. Bureau of Education in the Department of the Interior in 1870 was the collection and publication of national statistics on all phases of education. One of the earliest major statistical and descriptive reports of the agency was Public Libraries in the United States published in 1876, which reported on about 300 public libraries with collections larger than 10,000 volumes. The public library definition used in compiling this impressive bound and illustrated volume of 759 pages included academic and "society" libraries or, in effect, any substantial library that was not privately owned.

From that point on there were only occasional library surveys, including a few surveys of academic libraries. In 1937 the now named U.S. Office of Education (USOE) established for the first time a separate Services to Libraries Section, staffed by trained librarians whose responsibilities included library statistics as well as library research and development. Under several changes in the name of the unit, the statistics collected and produced by the library services unit of USOE, between the years 1938 and 1965, for public, academic and school libraries, and library

education, even though quite basic in content and methodology, were useful in the development of public policy and Federal legislation that for the first time provided Federal grants for the improvement and development of public libraries, school libraries, and academic libraries. For example, relative to school libraries, it was a sample survey done by postcard, and carried out with the cooperation of the Council of Chief State School Officers, that revealed a shocking lack of school libraries across the country at the elementary school level as well as serious deficiencies at the secondary school level. The result was the inclusion of a Federal grant program specifically for school library materials in the major education legislation of the 1960's, the Elementary and Secondary Education Act. These stimulative grants were the foundation of the development of school library media centers across the country as we know and survey them today.

In 1965, USOE centralized all statistical survey operations carried out by the various office units under a new National Center for Education Statistics (NCES). This did result in the further development, in cooperation with the national education and library professional organizations, of improved national standard terminology, definitions, and statistical methodology. There was a national conference on library statistics in 1967, and a planning document, Planning for a Nationwide System of Library Statistics, was published by the American Library Association in 1970, under an NCES contract. This was a period of great change including the use of computers in editing, tabulation, and other statistical functions, and the reorganization and reassignment of library statistics responsibilities. Most negatively, there was insufficient funding to support a recommended schedule of library surveys with regularity. The general decline in NCES performance during this period resulted in a request by the U.S. Department of Education, now a Cabinet-level agency, to the National Academy of Sciences in 1985 to make a study and evaluation of NCES. It was the recommendations of that study and their implementation in the 1988 legislation cited earlier, that subsequently improved NCES funding, staffing, and organization. These improved resources, in turn, provided the foundation for what is referred to here as the renaissance in national library statistics.

Under the 1988 legislation and appropriations, NCES was able to develop a cooperative agreement with the U.S. National Commission on Libraries and Information Science (NCLIS) under a Memorandum of

Understanding (MOU) to undertake a national library statistics program. NCLIS, established in 1970, appropriately had the authority "to conduct studies, surveys, and analyses of the library and information needs of the Nation . . . and contract with Federal agencies . . . to carry out any of its functions." It was also opportune that there had been earlier library statistics planning by an American Library Association (ALA) committee, under the leadership of Dr. Mary Jo Lynch, head of the ALA Office for Research and Statistics. This work is well described in the first paper, included in this volume, by Dr. Lynch.

Based on the finding that all of the 50 States and the District of Columbia (DC) were already collecting annual public library data, it was recommended by the committee that the first element of the national library statistics program should focus on the annual collection of public library data using each of the State library agencies as intermediaries for the development and collection of standard public library data. A representative task force established under the MOU developed An Action Plan for a Federal–State Cooperative System for Public Library Data (FSCS) that spelled out the specific data elements, their standard definitions, the need for a universe file, the methodology in using computer technology to record, edit, transmit, and publish the data from the 50 States and DC and the responsibilities of NCES, NCLIS, the state library agencies, and the task force. The task force would later evolve into the FSCS Steering Committee to advise NCES/NCLIS under specific Bylaws. Objectives of the system include good communication between all parties, training of participants in the use of the standard software and technology, the application of the standard data items and definitions, and the productive use of the resulting data at local, State, and Federal levels for research and public policy.

The rapid development and continuing improvement of FSCS in its first six years, 1988–94, has indeed been remarkable. Within the first two years all State library agencies were reporting their public library data by diskette, and each year the published data have shown improvement in survey coverage and quality. These positive results have been encouraging to NCES in the broader applications of computer technology and the principles of State and institutional level cooperation in the improvement of other education surveys.

In the library field, the same cooperative and technical principles have also been applied to the biennial academic library survey, part of the Integrated Postsecondary Education Data Survey (IPEDS) beginning with the 1990 data. Software was developed for the reporting, editing, transmitting, and publishing of the academic library data. In addition, library representatives were designated in each of the States to take responsibility and work cooperatively with the IPEDS Coordinators on the completeness and timeliness in reporting the academic library data. A training program for the library representatives has also contributed to the improvement of this program.

The cooperative Library Statistics Program, to complete this picture, also now includes an annual State Library Agency Survey that will be reported for the first time in 1995. The Library Statistics Program will also continue to lend assistance to the more in-depth gathering of school library media center data, including data on school library media specialists, under the major NCES School and Staffing Survey (SASS). In cooperation with the Federal Library and Information Center Committee (FLICC) of the Library of Congress, the Library Statistics Program is assisting in the planning and execution of much needed Federal Library Surveys. In an early planning stage is the development of a Library Systems Survey, a type of library service unit that most frequently does not provide direct library service to users and therefore falls outside of present public, school, and academic library definitions. These units provide resources and services to other libraries and are, therefore, important in improving nationwide library services.

The FSCS program has welcomed the interest and cooperation of the Bureau of the Census staff in the further improvement of the program. This applies particularly to the study by David Kellerman, Chief of the Research and Evaluation Branch of the Governments Division, on Evaluating Coverage in the Public Library Statistics Program, and the Study in Library Structure and Organizations and Their Relationship to the Census of Governments by Stephen D. Owens, an expert in governmental organization in the same Division. These are the third and fourth papers of this volume.

The FSCS Steering Committee has been fortunate to have as continuing members, not only Dr. Mary Jo Lynch of ALA, but also Dr. E. Walter Terrie, a professional demographer, statistician, and "techie" who

has been part of the Library Statistics Program since its inception, initially as the State Data Coordinator for the Florida State Library. Dr. Terrie has also done an annual analysis of the completeness of the public library data submitted to NCES and has perfected a software package for the analysis of the public library data (PUBLDAP). He has also prepared all FSCS participants, through his advice and counsel, with the realities that quality data are essential before time series can be considered valid and reliable. Dr. Terrie's paper in this volume provides analyses and mapping of the public library data never before visably available.

A strong attribute of the cooperative Library Statistics Program and a great contribution to its renaissance has been the creation of the Library Statistics Unit in the NCES organizational structure with a staff, though small, that possesses statistical leadership and communication skills. The counterpart staff at NCLIS has professional experience in working successfully with the national library community. The two staffs working cooperatively in the areas of training, communication, data use, and other professional program elements have played a significant role in achieving the current stage of development of this national library statistics program.

PUBLIC LIBRARY STATISTICS: TWO SYSTEMS COMPARED

By

Mary Jo Lynch, Ph.D.
Office for Research and Statistics
American Library Association

For presentation at the 1994 Joint Statistical Meetings of the American Statistical Association, August 16, 1994

I. Introduction

My purpose this morning is to describe two systems that collect data on public libraries. The first and most comprehensive data system, the Federal-State Cooperative System for Public Library Data (FSCS), is part of the National Center for Education Statistics (NCES). The second, Public Library Data Service (PLDS), is part of the Public Library Association (PLA). I probably don't need to describe NCES to this audience, but I will say a word of introduction about PLA. PLA is one of the 11 specialized divisions of ALA--the American Library Association. ALA, the association that pays my salary every two weeks, is a non-profit, 501c3 association of over 54,000 personal members. We also have over 2,500 organization members but our main focus is on service to the 54,000 personal members. Most are practicing librarians.

They come primarily from three types of libraries: academic libraries (those in colleges and universities), school library media centers (those in elementary and secondary schools), and public libraries (those that serve entire communities, usually as part of municipalities but sometimes part of counties or other local government units). About 8,000 members with a special interest in public libraries belong also to the ALA division called the Public Library Association (PLA). We'll come back to the PLA in a few minutes but first a few general remarks about public libraries.

II. Public Libraries: Definition and Distribution

The current FSCS definition of a public library is as follows:

"A public library is established under state enabling laws or regulations to serve the residents of a community, district, or region. A public library is an entity that provides at least the following: 1) an organized collection of printed or other library materials, or a combination thereof; 2) a paid staff, to provide and interpret such materials as required to meet the informational, cultural, recreational, and/or educational needs of a clientele; 3) an established schedule in which services of the staff are available to clientele; and 4) the facilities necessary to support such a collection, staff, and schedule.

The FSCS definition ends with this caveat. "Note: State law determines whether an entity is a public library." As far as we can determine, almost all of the public libraries described by FSCS statistics do meet the FSCS definition, but since a few states recognize as public libraries a few entities that don't meet all four criteria, and since FSCS is a cooperative system, the caveat is necessary.

According to *Public Libraries in the United States: 1992*, the fourth annual report of the FSCS, there are 8,946 public libraries in the U.S. Of those, 1,463 have one or more branches for a total of 7,035 branches. The 8,946 public libraries are found in all states with the numbers per state ranging from 1 in Hawaii, to 23 in Wyoming, to 24 in Maryland to 512 in Iowa to 761 in New York. The number of public libraries in a state may have little relationship to the population or geographic area of a state because of differences in the way library service is organized. Maryland has 24 county libraries to serve 4.9 million whereas Iowa has 517 municipal libraries to serve only 2.9 million. However, Iowa has only 28 branch libraries whereas Maryland has 184. Another difference: in Maryland, none of the 24 libraries serve populations of less than 10,000 whereas in Iowa 89.6% serve populations of less than 10,000. The Iowa pattern is more common as 61% of the public libraries in the U.S. serve populations of less than 10,000. Figure 1 shows the distribution of public libraries by range of population served.

III. National Statistics on Public Libraries 1876–1988

The federal government has been collecting statistics about public libraries for almost 120 years. The first report, in 1876, used a very different definition of a public library from the one just given. For that report, a public library was any library that was located somewhere other than in a personal residence. College libraries were included, as was any other library accessible to more than

one person or family. Eventually, the definition of public library became more specific. National data collection occurred sporadically, usually on a sample basis, until FSCS was established in the late 1980s.

Several factors combined to start FSCS. One of them was a series of projects I coordinated with funding from the US Department of Education. In 1983 ALA responded to an RFP that called for an analysis of current statistics collected at the state or national level on all types of libraries, primarily by NCES but also by other agencies, and for development of a plan for the future.

We noted in our proposal that we would explore the statistics collected from public libraries by the 50 state library agencies. We suspected most states did this and suspected, further, that they collected similar data. We were right in the first case. All states but one collected data regularly and the one non-collector had collected it in better times. In many states, the annual data collection was mandated by the law charging the state library agency with responsibility for public library development.

We were not quite right about similarity between and among states. Although the general topics were very similar, the line items and instructions were often different. I found this out by hiring an experienced indexer who analyzed the 50 state questionnaires, line by line, and produced over 300 pages of grids with line items as columns and the 50 states as rows and xs in cells to show which states used an item. When this work was complete we concluded that, although there certainly were differences, they were not big enough to prevent establishment of a common system. Before suggesting this to NCES in the final project report, I tried it out on the 50 Chief Officers of State Library Agencies (COSLA) at their annual fall meeting. They gave me the go-ahead, so the final report in 1984 recommended the establishment of a system that would combine the annual collection of public library statistics by state library agencies to produce a national statistical report on public libraries to be issued by NCES. That is what we have now, but it didn't happen immediately.

Both NCES and the Library Programs Office of the Department of Education funded a pilot project from 1985 to 1987. The original proposal was to work with 5 to 7 states to explore ways to achieve consistency in items and reporting in machine readable form. When we invited the 50 states to participate, 20 volunteered and 15 stuck it out to the end of the project. By the time the project was completed in 1987, another force was at work to support the development of the cooperative system--the Hawkins-Stafford Elementary and Secondary School Improvement Act of 1988. One part of this law specifically charged NCES to collect statistics about libraries and mentions the need for a federal-state cooperative system for public library data.

Once the law passed, a task force of representatives from several governmental and private agencies, including NCES and ALA, met monthly for seven months to develop an action plan. Part of that plan called for annual meetings of NCES and the 50 state data coordinators beginning in December 1988. Another key component was the development of computer software known as DECTOP (Data Entry Conversion and Table Output Program). DECTOP was designed to allow import of data from Lotus, dBASE III, and ASCII files so states could still use their local software systems for state data requirements.

A third key component in FSCS is a steering committee that meets at least 3 times a year to solve problems and plan improvements. Serving on the committee are 5 persons elected by the State Data Coordinators, NCES personnel, staff of the National Commission on Libraries and Information Science (NCLIS) and a few ad hoc experts like me and Walter Terrie. Decisions are made by this group in concert with the 50 states.

IV. Current Status

This is how FSCS works. Each of the 50 states collects data annually using their own form and procedures. Most collect more data than FSCS requires but for those 40 some items they use our item names and definitions. Data for those items is entered into DECPLUS directly or imported from another software program. After edit checks are run and corrections are made, the disk is sent to NCES. Again there are edit checks and corrections until NCES judges that data are good enough to run tables. Each year, when the Steering Committee studies the tables, we find anomalies that must be resolved--and they are.

In 1988--the first year--the combined data was not good enough to be published as an E.D.Tab report by NCES. Instead, it came out as a working

paper. From 1989 on the combined results were good enough to be published by NCES. The 1992 report was released on the OERI Bulletin Board in June and went on the OERI gopher in July. A data diskette with library by library data was released a few weeks ago and the paper report has just been published by the Government Printing Office.

So what is FSCS good for? If I want basic descriptive data on public library services, collections, staff, income, expenditure for the U.S. as a whole, for a single state or for any one of 10 population size ranges, I go to the FSCS tables. For those who are more computer literate than I am, the data disk can be used to compare self-selected groups of libraries all over the nation that share certain characteristics. And there is more. Part of FSCS is a universe file of public libraries that contains key characteristics such as governance (municipality, county or something else) or location (urban, suburban, rural). This is an excellent frame for samples.

V. PLA's Public Library Data Service

While all this work was going forward in NCES, another system for public library statistics was being developed in the private sector--PLA's Public Library Data Service. This too has a long history and is closely related to PLA's efforts to help libraries plan service programs based on local conditions and demonstrate accountability by measuring results. The first step along this path was the publication of *A Planning Process for Public Libraries* (Chicago: ALA, 1980) in the early 1980s followed by *Output Measures for Public Libraries* (Chicago: ALA, 1982). After a few years, both manuals needed revision and PLA assembled a team of experts and the funding to do the work. This time there was to be a third component in the process--in addition to revising the two earlier works, the team was charged with designing a system that would collect key management data annually from public libraries and publish it promptly. I served on that team and was asked to take the lead in designing the data service. This assignment came at the same time that I was working on the pilot project that led to FSCS. The bad news is that people thought I was crazy, working on two different projects to do what seemed like the same thing. The good news is that I was able to ensure that most of the items and definitions are the same in both systems thus avoiding confusions for those who report the statistics and for those who use them.

PLA never had any allusions about collecting data from <u>all</u> public libraries. Their focus would be on the several hundred large public libraries serving populations of over 100,000. Two systems already existed for doing this and neither was satisfactory. Since 1959 the Allen County Public Library in Fort Wayne, Indiana had collected basic descriptive statistics from "Public Libraries in the U.S. and Canada Serving Populations of 100,000 and Over" every 2 years. They did it as a labor of love and did not go to great lengths to advertise its availability. In the years when Fort Wayne did not collect, similar though not identical data was collected by the Urban Libraries Trustees Council. This was even harder to get hold of. Neither of these two agencies really wanted to continue their efforts. PLA was eager to do so and sure it could be done better. They planned to focus on the big libraries but would invite others to participate also. Such an invitation was essential for an organization that claimed to represent all public libraries.

After the team of experts mentioned earlier completed the work of developing a preliminary design for a public library data service, PLA contracted with my office to spell out the details. We were able to complete almost all of what has turned out to be a very good plan. But they asked me to stop when I told them the next step was to develop quality control measures. PLA's basic philosophy at the time was expressed in the preface to the first annual report of the PLDS "What you see is what we got." I disagreed then and still do but that attitude did enable PLA to collect data in January and publish it in June. That's what they did in 1988--the first year--and that's what they've done every year since. Over time, I suspect data quality has improved just because peers in a group of 500-600 libraries see each other's data and challenge anomalies. But no one has studied that issue.

So what is PLDS good for? If I want basic descriptive data on a specific large public library (one serving over 100,000), I go to the PLDS report. Results are summarized for each variable by quartiles for 10 population size ranges but only results for the 4 ranges above 100,000 are reliable as the samples from smaller communities are much too small and very self-selected. Figure 2, using figures from the 1994 PLDS report,

compares coverage of PLDS to coverage of FSCS by population range.

In addition to all of the variables covered by FSCS, PLDS also has additional variables such as which of eight possible "roles" has been chosen for emphasis and the library's score on specific output measures, many of which are somewhat time consuming to collect because they involve user surveys or special record keeping by staff. Most important to many PLDS users, PLDS reports salary of director and salary of beginning librarian. PLDS is also useful for the special topic data unique to each year. In 1993 the special topic was fundraising and in 1994 the special topic was service to children.

Figure 3 summarizes differences in these two systems. I use both FSCS and PLDS in my work as do others concerned with public library statistics. For example, a newspaper reporter from a big city wants to know how much money the library in her city gets from state government. PLDS is my source. To put that in context, she wants to compare her city with several specific others. Again I use PLDS. Then she wants to know about state funds for local libraries in the whole state and in the nation. For those answers I turn to FSCS. The two work together very well and I hope they both continue for a long time. The signs are good that it will happen.

REFERENCES

1. *An Action Plan for a Federal-State Cooperative System for Public Library Data (FSCS).* Task Force on a Federal-State Cooperative System for Public Library Data. Washington, D.C.: National Commission on Libraries and Information Science, Apr. 1989.

2. Lynch, Mary Jo. "Analysis of Library Data Collection and Development of Plans for the Future: A Project Summary." *Bowker Annual of Library and Book Trade Information.* New York: Bowker, 1985. Pp. 405-411.

3. Lynch, Mary Jo. "New, National, and Ready to Fly: The Federal State Cooperative System (FSCS) for Public Library Data." *Public Libraries* 30 (November/December 1991): 358-361.

4. *Public Libraries in the United States: 1991.* Washington, D.C.: U.S. Department of Education. National Center for Education Statistics, 1993.

5. *Public Libraries in the United States of America, Their History, Condition and Management, Special Report*, Part I. Washington, D.C.: U.S. Government Printing Office, 1876.

6. Public Library Data Service. *Statistical Report, 1994.* Chicago: Public Library Association, 1994.

Figure 1. Size of Population Served by 8,946 Public Libraries, 1992

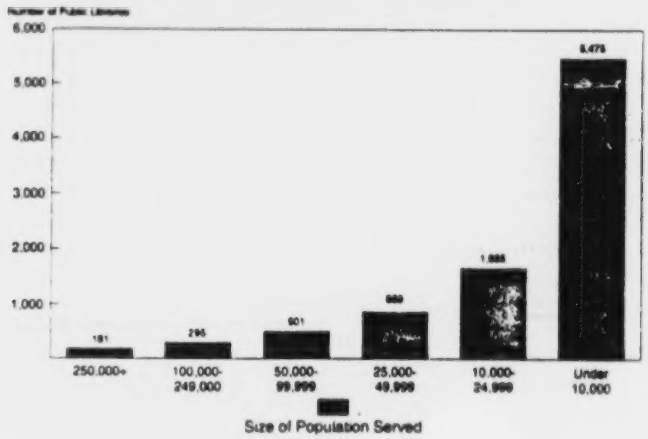

Figure 2. Public Libraries in FSCS and PLDS

Population	FSCS '91	PLDS '94
Over 1,000,000	19	22
500,000 to 999,999	52	46
250,000 to 499,999	91	76
100,000 to 249,999	285	207
50,000 to 99,999	500	170
25,000 to 49,999	867	65
10,000 to 24,999	1631	29
5,000 to 9,999	1487	19
under 5,000	3982	19
TOTAL	8914	653

Figure 3. Comparison of Characteristics, FSCS and PLDS

Sponsor	FSCS	PLDS
Purpose	gov't agency	non-profit assn.
Frequency	policy	management
Source	annual	annual
Coverage	state agencies	public libraries
Quality Control	all (8,946)	some(685)
Time Lag	high at least 12 months	low 6 months
Products	paper, disk, Internet	paper, search for fee
Presentation	nation, state, 10 population ranges	library-by-library

COUNTING PUBLIC LIBRARIES IN THE UNITED STATES

By

E. Walter Terrie, Ph.D.

Center for the Study of Population
Florida State University
Tallahassee, FL 32306-4063
e-mail: terrie@coss.fsu.edu

Revision of a paper prepared for the Annual Meeting of the American Statistical Association, August, 1994, Toronto, Ontario, Canada

INTRODUCTION

The collection and dissemination of public library statistics in the United States has been a largely sporadic and ad-hoc venture. Beginning back in the 1870's the recently formed U.S. Office of Education collected statistical information on public libraries and published a report *Public Libraries in the United States.* There was, however, no ongoing systematic attempt to collect, analyze and disseminate public library statistics at the national level. Various states, working independently of each other, had published State library directories and statistical compendiums as they found necessary or desirable. As early as 1970 there were calls for the creation of a national system for the collection of public library statistics (LaMoure, 1988).[1] At the national level there were also efforts such as the National Center for Education Statistics' (NCES) 1974 Library General Information Survey (LIBGIS) and its' subsequent revisions. These efforts succumbed to changing priorities and reduced funding and ceased to exist by the early 1980's (Lorenz, 1989).

In 1984, the American Library Association's (ALA) Office for Research completed a report commissioned by the Center for Education Statistics (now NCES) describing the library (public, academic and school media) statistics collection program in each of the states. The report noted that all 50 states collected some annual statistics from

[1] According to LaMoure, there were two such calls in 1970. One was the American Library Association's *Standards for Library Functions at the State Level* and the second a report issued by the New York State Library, *Planning for a Nationwide System of Library Statistics.*

public libraries and that with the adoption of a common core of items and definitions it would be possible to develop an annual census of public library statistics within the U.S.

On October 1, 1985, a pilot project involving ALA, NCES and the states was begun to determine the feasibility of establishing a Federal/State Cooperative System for Public Library Statistics (FSCS).[2] All 50 states were invited to participate. Twenty initially expressed an interest and 15 became active participants in the pilot project.[3] In March of 1986 a workshop was held in Chicago for the participating states to revise items, definitions and instructions and to prepare to incorporate the common items into their respective questionnaires.[4] Twelve states[5] eventually submitted FY[6] 1986 public library data as part of the demonstration project. Encouraged by the results, plans were formulated for a 1987 data collection effort, and a Task Force On A Federal-State Cooperative System for Public Library Data was jointly formed by NCES and the U.S. National Commission on Libraries and Information Science (NCLIS).

--A legislative mandate to collect public library statistics was included in the Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988 (PL 100-297). Section 406, subparts a-g mandated the development and support of a voluntary Federal-State Cooperative System for annual nationwide collection and dissemination of public library data.

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[2]Details of this pilot project are taken from various unpublished memoranda from my personal files.

[3]They were: California, Colorado, Florida, Idaho, Indiana, Minnesota, New Hampshire, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Utah, Washington and Wyoming.

[4]The 1986 pilot contained 69 separate data elements. In 1987 this number was reduced to 64. By 1991 only 37 data elements remained in the common core. There are currently 39 data elements collected and another 4 elements taken from the universe file are also appended.

[5]They were: California, Colorado, Florida, Idaho, New Hampshire, Ohio, Oklahoma, Oregon, South Carolina, Utah, Washington and Wyoming.

[6]FSCS data is submitted by the states on a fiscal year basis. This FY varies across states and even varies across libraries within some states.

The Task Force completed its' work and in April of 1989 issued a report entitled *An Action Plan for a Federal State Cooperative System for Public Library Data* (Lorenz, 1989). The report called for the establishment of a universe file of all public libraries and the collection and reporting of common core of data elements using standard definitions in each of the states. It detailed a complete plan for organization, implementation, governance and operation of FSCS. A key feature of the plan was the establishment of a State Data Coordinator within each state and the District of Columbia to whom responsibility was given for collection, editing and submission of information from each individual library within the state.

Data from 19 states for FY 1987 were submitted by July of 1988. In December of 1988, the first Annual Conference for FSCS was held in Annapolis Maryland and attended by 49 of the 51 appointed State Data Coordinators. At this conference, 40 states expressed their intent to submit 1988 data. Forty-five states[7] were actually able to do so and results of their efforts were reported in an NCES Working Paper entitled *Public Libraries in Forty-Four States and the District of Columbia: 1988* (Podolsky, 1989). A variety of methodological difficulties with these data were identified or suspected and they should be used with considerable caution.

Data from all fifty states and the District of Columbia were submitted for FY 1989. Tennessee was unable to supply data for individual libraries within the state but did submit an aggregated state total for the data elements. These data were reported in *Public Libraries in Fifty States and the District of Columbia: 1989* (Podolsky, 1991). The discussion in this paper will be limited to information from this time forward. Information for FY 1990 through FY 1992 is also currently available. 1993 data is being submitted to NCES in July of 1994.

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[7]All states except Alabama, Georgia, Kansas, Maine, Nevada and Tennessee participated.

There are two interrelated components to the FSCS data collection. The first is statistical data collected from library administrative entities. This includes information on staffing, income, expenditures, collection, circulation and hours of service.[8] The second component, a universe file, provides selected characteristics of the location of public library outlets. This includes address, zip+4, county, and metropolitan status code.[9] These data are submitted annually to NCES by the State Data Coordinators. The information is made available to the public through public use data files and through the publication of an ED-TAB which reports summaries by state and by population of legal service area.

The FSCS system has undergone inevitable "growing pains" associated with launching a new data collection endeavor. Steady progress continues to be made toward the collection and dissemination of reliable and valid nationwide public library statistics. However, much work still remains. For example, imputation of unreported data is not yet performed. For this and other reasons, time-series comparisons should probably not be undertaken at this time. Never-the-less, these data appear to be improving[10] and with appropriate caution are useful for measuring the status of public library service in the U.S.

The remainder of this paper explores issues surrounding the most fundamental of all census tasks; namely determining the actual number of public libraries by type during FY 1992 which is the latest year for which this information is available.

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[8]Appendix B contains a list of data elements and definitions for the administrative entity file.
[9]These elements and definitions are shown in Appendix C.
[10]For example, item non-response rates have declined steadily each year.

WHAT IS A PUBLIC LIBRARY?

According to the current FSCS definition:

> "A public library is established under state enabling laws or regulations to serve the residents of a community, district, or region. A public library is an entity that provides at least the following: 1) an organized collection of printed or other library materials, or a combination thereof; 2) a paid staff to provide and interpret such materials as required to meet the informational, cultural, recreational, and/or educational needs of a clientele; 3) an established schedule in which services of the staff are available to clientele; and 4) the facilities necessary to support such a collection, staff, and schedule. For purposes of the FSCS data collection, however, state law prevails in the determination of a public library and not all states' definitions are the same as the FSCS definition." (Chute and Kroe, 1994; p. 7)[11]

Several feature of this definition should be noted. First, a public library must provide all of the four defining features described. A professional (paid) staff must be available to provide and interpret the materials. There must be an established schedule of services and adequate facilities. One critical feature of the definition is, however, that irrespective of the definition, *state law prevails* in determining what is or is not considered a public library within FSCS.

In a recently commissioned coverage evaluation, the U.S. Bureau of the Census states:

> "This last note is of paramount importance. From a statistical point of view, it permits and codifies state differences in the definition of a public library and in some cases nullifies the rest of the definition. This results in counts of public libraries that would change in some states if a more uniform definition were used across the country." (Census Bureau, 1994 p.16)

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[11]Libraries on Indian Reservations or on military bases are considered "special libraries" and are thereby excluded from FSCS.

The definition of a public library has evolved over time. For FY 1989, the definition was:

> "A library is an organized collection of information resource materials in graphic, textual, audio, visual, and/or machine readable format(s), arranged in facilities and services by trained staff to provide patron/user/client programs and access services offered on a regularly scheduled basis and regulated by operating procedures through budgeted funds." (Podolsky, 1991, p. 1)

Note the differences in this definition. The staff did not have to be paid, but budgeted funds were required. No mention was made of the primacy of state law. The definition used for the FY 90 and 91 was very similar to the current definition but also did not specify that the staff be paid. (Chute, 1992 and 1993, p. 5)[12]

Another crucial FSCS definitional issue, is the distinction between a library *administrative entity* (the FSCS reporting unit) and a library *service outlet*. An administrative entity is:

> "... legally established under local or state law to provide public library service to a particular client group ... The administrative entity may be administrative only and have no outlets, it may have a single outlet, or it may have more than one outlet." (Chute and Kroe, 1994, Appendix B)

Most administrative entities within the FSCS census are public libraries. Some, however, are systems, federations or cooperatives, which coordinate and administer library services supplied through a group of semi-autonomous central libraries, branches and/or bookmobile services. An extreme example is the State of Hawaii in which public library services are administered from the State Library through 1 central library, 47 branches and 6 bookmobile services. Other federated library systems provide support and services for independent public library administrative units. These federations are not

[12]One proposed change to the definition currently under discussion is that a public library should receive public funding.

themselves considered a public library and are not normally included in the statistical reports.[13] The formal definition for these type of systems is:

> "A group of autonomous library entities joined together by formal or informal agreements to perform various services cooperatively such as resource sharing, communications, etc." (Chute and Kroe, 1994, Appendix B)

Governance and affiliation information for each administrative entity is determined by three codes. The first, library system relationship, shows whether or not the administrative entity is part of a system and, if so, are they the headquarters or are they receiving or providing services. The legal basis code shows the local governance structure, whether municipal, county, library district, school district, etc. The final variable describes the administrative structure, whether single outlet, multiple outlet or administrative only.[14]

Public libraries are organized by administrative entity but the public is served through library service outlets. Outlets are the facilities which provide direct service to the public. Within FSCS there are three outlet types: central libraries, branch libraries and bookmobile services. Each outlet is associated with an administrative entity and a very limited amount of information is collected for each outlet.[15]

A central library is the location where the principal collection is maintained. The administrative offices may be located elsewhere. Some regional, multi-county or other libraries may not report a central library, referring instead to each outlet as a branch.

A branch library is defined as:

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[13]The author is aware of at least one state in which statistical information for these type of federations is reported in addition to reports from the associated public library administrative entities, thereby producing some overreporting of the number of libraries and some other data.
[14]See Appendix B for complete details.
[15]See Appendix C.

"An auxiliary unit of an administrative entity which has at least all of the following: 1) separate quarters; 2) an organized collection of library materials; 3) paid staff; and 4) regularly scheduled hours for being open to the public." (Chute and Kroe, 1994, Appendix B)

A bookmobile service is an outlet that operates one or more bookmobiles. A bookmobile is defined as:

"A traveling branch library. It consists of a least all of the following: 1) a truck or van that carries an organized collection of library materials; 2) paid staff; and 3) regularly scheduled hours (bookmobile stops) for being open to the public." (Chute and Kroe, 1994, Appendix B)

The following chart shows some of the possible ways in which these administrative entities and outlets can be interrelated.

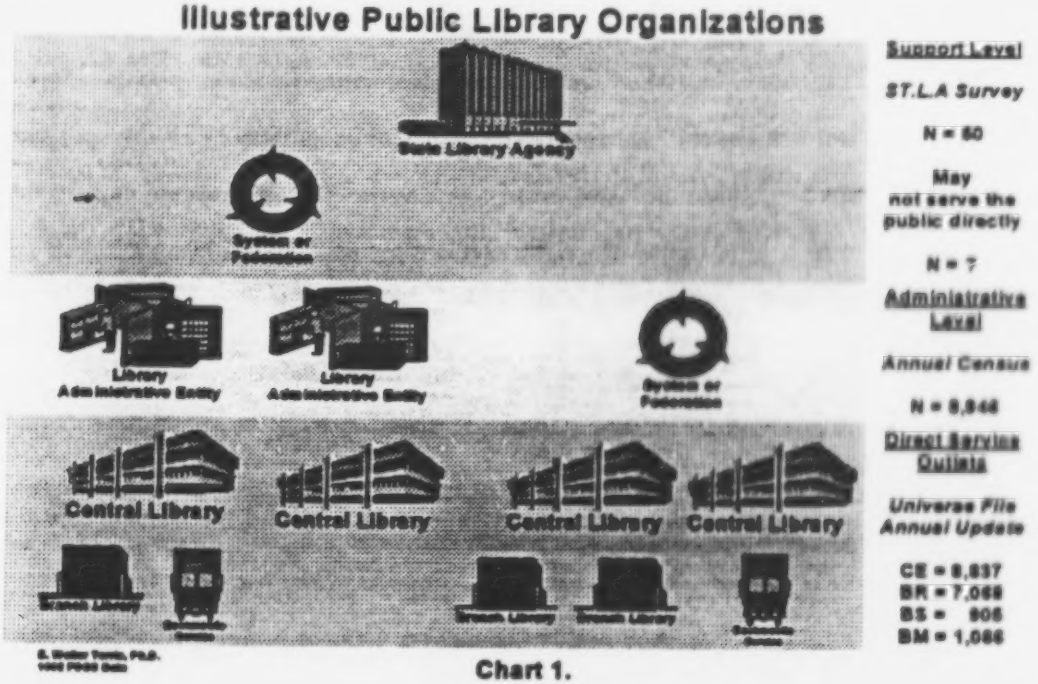

Chart 1.

As may be seen, there are three conceptually distinct levels involved with the provision of library services. The first is the support level. This level facilitates the delivery of public library services, but does not provide them directly. Each state has a State Library

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Agency which promotes and assists the development of public library service. A State Library Agency Survey is currently under development within FSCS which will permit comparisons of their programs and activities. Many public libraries belong to federations or cooperatives which also support their activities.

The next organizational level is the administrative level. In so far as FSCS is concerned, entities at this level are the public libraries. The left side of the chart shows two administrative entities who belong to a system or federation which provides them with services.

The third level is the direct service outlets. This is what most members of the general public would probably consider a library. This level consists of the central libraries, branches and bookmobile services.

The chart shows several possible organizational arrangements. The left most entity has one central library, one branch and one bookmobile service. FSCS would consider this a multiple outlet administrative entity which was also a member of a system or federation. The next library to the right is also a member of that system but is a single outlet administrative entity.

On the right is an illustration of a federated system in which two semi-autonomous libraries have joined together into a regional system which serves as their centralized administration. This kind of an organization would be reported in FSCS as having two central libraries, two branches and one bookmobile service.

Public library service is also provided through what are known as other outlets. Examples would be books-by-mail or small collections maintained at extended care facilities, hospitals, jails and the like. FSCS use to collect information about number of other outlets, but this is no longer attempted. As may be seen, the question, "what is a public library?" does not have a short or simple answer.

HOW MANY PUBLIC LIBRARIES ARE THERE IN THE U.S.?

The answer to that question has changed over the four years of the FSCS data collection. Part of the change is due to improved reporting and part of it is due to public library reorganization efforts. The trend in the provision of library service to the public has been towards consolidation of separate libraries into regional or county-wide library "systems". The actual number of service outlets has remained relatively steady.

The short answer to the question is that there are around 9,000 public library administrative entities in the United States.[16] There are about 16,000 stationary outlets (central and branch libraries) and 900 bookmobile services utilizing more than 1,000 bookmobile vehicles. These numbers show clearly why it is necessary to specify what you mean by the term "library" when counting them.[17]

Table 1 shows the count of public libraries and library outlets by state and by year as reported to FSCS. The Bureau of the Census undertook an independent assessment for FY 1991 which is also included in the table. The Bureau utilized information from library directories published by each of the states, supplemented in some cases by information obtained directly from the state library agency. Their count of 9,092 was a close match to the 1991 FSCS count of 9,050.[18] (Census Bureau, 1994, p.17) It would appear, therefore, that the FSCS system is doing a very good job of obtaining a complete census count, though there is likely an undercount of most data elements due to item non-response combined with a lack of imputation procedures.

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[16]The fifty states and the District of Columbia. The territories to this point have not been participants but have recently been invited to join and submit their data.

[17]I recently heard Attorney General Janet Reno on the radio stating her intent to supply each of nation's 16,000 libraries with information on how to comply with the American's with Disabilities Act. Clearly she was thinking of library *buildings* rather than of libraries. I wonder if each central and branch library will actually be supplied with copies of these materials.

[18]The Census Bureau's count can be seen in Table 1. Overall coverage rate was 99.5%

Table 1.
Number of Administrative Entities by State and Year

	FY 1992						FY 1991	FY 1990	FY 1989
STATE	Entities	Centrals	Branches	BK Mobs.	Outlets	Census Bur.	Entities	Entities	Entities
AK	85	85	11	3	99	89	83	81	88
AL	204	194	71	20	285	198	206	206	200
AR	36	33	171	11	215	36	36	37	38
AZ	39	87		14	172	96	89	91	83
CA	168	158	929	70	1157	168	168	168	169
CO	120	114	120	18	252	112	119	124	134
CT	194	194	50	8	252	194	194	194	192
DC	1	1	26	1	28	1	1	1	1
DE	29	27	2	2	31	29	29	29	29
FL	110	95	294	36	425	112	112	119	115
GA	54	49	313	41	403	53	53	53	53
HI	1	1	47	6	54	1	1	1	1
IA	517	517	28	7	552	523	513	500	494
ID	107	105	37	5	147	107	107	107	111
IL	607	607	157	30	794	605	602	603	597
IN	238	239	183	48	470	238	238	238	238
KS	320	313	45	11	369	322	338	318	317
KY	116	117	69	110	296	116	115	115	115
LA	64	64	257	32	353	64	64	64	64
MA	374	374	116	17	507	374	374	374	348
MD	24	18	174	20	212	24	24	24	24
ME	226	226	5	1	232	242	225	238	238
MI	377	377	274	25	676	377	377	376	379
MN	133	122	231	22	375	133	133	130	133
MO	143	143	198	45	386	152	150	142	142
MS	47	47	198	2	247	47	47	46	46
MT	83	83	28	5	116	82	82	82	81
NC	74	71	276	59	406	77	73	73	100
ND	90	90	11	13	114	95	91	95	93
NE	269	269	15	11	295	272	270	264	261
NH	232	232	9	2	243	230	230	228	228
NJ	310	295	155	25	475	312	311	311	313
NM	74	74	18	4	96	72	63	68	70
NV	26	26	48	3	77	26	26	26	26
NY	761	761	336	18	1115	741	761	760	761
OH	250	244	436	60	740	250	250	250	250
OK	110	110	80	12	202	108	108	106	106
OR	125	118	76	13	207	124	124	125	123
PA	446	444	178	27	649	470	448	445	441
RI	51	51	24	3	78	49	51	51	51
SC	40	40	137	38	215	40	40	40	40
SD	116	116	20	10	146	118	118	118	110
TN	136	124	147	16	287	190	190	135	178
TX	484	484	252	21	757	489	482	478	468
UT	69	49	43	29	121	69	70	69	69
VA	90	83	206	41	330	90	90	90	88
VT	205	205	6	0	211	204	204	205	200
WA	70	62	250	23	335	70	70	70	70
WI	380	378	74	15	467	380	379	377	372
WV	98	98	78	10	186	98	98	98	98
WY	23	23	55	3	81	23	23	23	23
TOTALS	8,946	8,837	7,035	1,066	16,938	9,092	9,050	8,966	8,969

Table 2.
Administrative Characteristics by State, FY 1992

Note: See Appendix B for definition of codes.

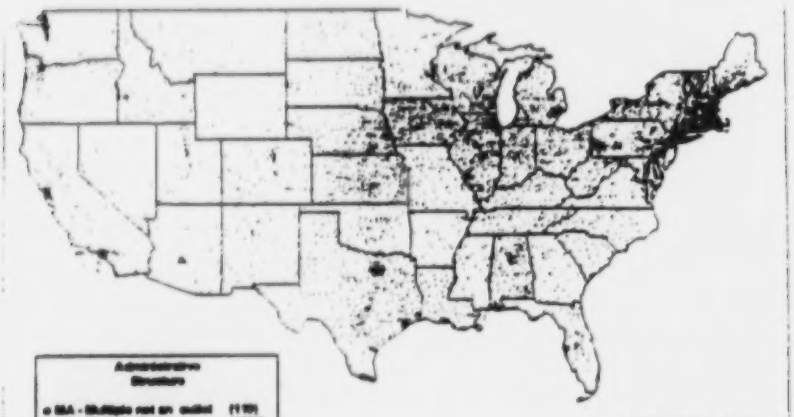
		Administrative Structure			System/Federation Relationship					Legal Governance Basis				
STATE	Entities	MA	MO	SO	HQ	NO	OT	SP	SR	CI	CO	NP	SD	OTHER
AK	85	0	8	77	0	81	0	4	0	41	4	22	0	18
AL	204	2	19	183	16	41	10	2	135	151	15	0	2	38
AR	36	6	24	6	30	6	0	0	0	6	11	0	0	19
AZ	39	4	14	21	10	28	0	1	0	27	2	0	7	10
CA	168	10	103	55	0	6	0	162	0	105	52	0	11	11
CO	120	2	31	87	0	0	0	0	120	34	20	0	43	66
CT	194	0	30	164	0	11	0	0	183	98	0	96	0	0
DC	1	0	1	0	0	1	0	0	0	1	0	0	0	0
DE	29	0	1	28	0	19	2	0	8	27	2	0	0	0
FL	110	0	46	64	0	1	109	0	0	45	41	0	1	24
GA	54	4	46	4	0	54	0	0	0	0	2	0	0	52
HI	1	1	0	0	1	0	0	0	0	0	0	0	0	1
IA	517	0	13	504	0	0	0	0	517	514	3	0	0	0
ID	107	0	13	94	1	106	0	0	0	72	0	2	28	33
IL	607	0	59	548	0	3	0	604	0	359	0	0	247	248
IN	238	0	74	164	0	236	0	2	0	54	45	4	0	135
KS	320	0	9	311	5	13	1	0	301	290	15	0	0	15
KY	116	0	109	7	0	116	0	0	0	3	8	0	102	105
LA	64	2	59	3	2	52	0	10	0	4	59	0	0	1
MA	374	0	57	317	0	374	0	0	0	374	0	0	0	0
MD	24	9	14	1	2	0	0	0	22	0	23	0	0	1
ME	226	0	2	224	0	3	0	0	223	168	0	57	0	1
MI	377	0	51	326	0	10	0	0	367	236	28	0	81	113
MN	133	10	20	103	3	10	6	5	109	106	13	0	0	14
MO	143	1	42	100	41	101	1	0	0	82	35	6	1	20
MS	47	0	39	8	0	47	0	0	0	2	29	0	0	16
MT	83	0	16	67	0	0	0	83	0	17	32	0	1	34
NC	74	16	50	8	0	74	0	0	0	10	42	5	0	17
ND	90	0	14	76	2	76	0	0	12	75	13	0	0	2
NE	269	0	12	257	0	0	4	8	257	257	9	0	0	3
NH	232	0	10	222	3	53	0	176	0	216	0	9	0	7
NJ	310	0	42	268	0	23	0	16	271	231	14	59	0	6
NM	74	0	6	68	1	73	0	0	0	65	3	6	0	0
NV	26	0	9	17	0	12	0	14	0	3	10	0	0	13
NY	761	0	64	697	25	2	0	21	713	197	5	402	18	157
OH	250	7	88	155	0	65	0	0	185	24	55	18	0	153
OK	110	0	8	102	8	102	0	0	0	99	5	0	0	6
OR	125	2	21	101	8	33	0	78	6	90	19	4	9	12
PA	446	0	54	392	22	204	0	0	220	0	0	0	0	446
RI	51	0	9	42	5	5	0	1	40	20	0	31	0	0
SC	40	0	37	3	4	36	0	0	0	1	35	0	0	4
SD	116	0	14	102	0	116	0	0	0	89	18	1	0	8
TN	136	10	22	104	4	3	12	0	117	38	86	0	12	12
TX	484	3	60	421	0	28	0	11	445	261	145	63	0	15
UT	69	5	10	54	0	69	0	0	0	40	27	0	0	2
VA	90	19	36	35	0	90	0	0	0	23	42	0	0	25
VT	205	0	6	199	1	198	0	5	1	98	0	95	0	12
WA	70	8	14	48	0	70	0	0	0	50	0	0	20	20
WI	380	0	17	363	0	0	0	16	364	331	15	0	0	34
WV	98	0	30	68	13	13	0	0	72	48	30	1	0	19
WY	23	0	20	3	0	23	0	0	0	0	23	0	0	0
TOTALS	8,946	121	1,553	7,271	207	2,687	145	1,219	4,688	5,082	1,035	881	583	1,948

Table 1 also provides outlet type detail by state for the FY 1992 census. There were 8,946 reporting libraries supplying services through 8,837 central libraries, 7,035 branch libraries and 1,066 bookmobiles for a total of 16,938 service outlets. The outlet file counts provided a close match with 8,867 central libraries and 7,068 branches listed in the universe file. New procedures now in place for the FY 1993 collection should yield and even closer match between these two sources.

Table 2 shows the administrative structure, legal basis, system relationships for FY 1992. The overwhelming majority of public libraries in the United States are single outlet administrative entities which means they provide all of their service from a single location. These libraries constitute 81.3% of the total. Another 17.4% operate multiple outlets. The remaining libraries provide service through one or more outlets but maintain separate administrative offices that do not provide direct public library services.

Map 1 shows the distribution of these libraries across the contiguous 48 states and DC by type of administrative structure.

Public Library Administrative Entities by Administrative Structure
48 States & DC; FY 1992



Map 1.

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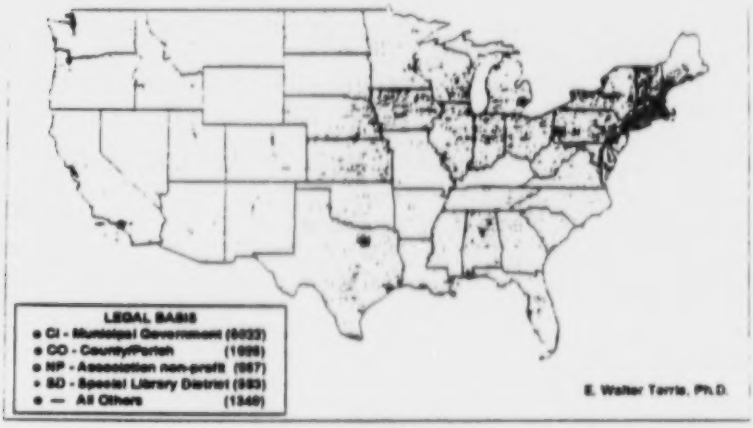
As may be seen from the map[19], the administrative structure of public libraries varies considerably by region of the country. In New England, Texas, most of the mid-Atlantic, Great Lakes and mid-west states, public libraries have only a single outlet and the pattern strongly suggests that each individual community operates its' own library. The remainder of the nation is more of a mixture with much greater proportions of multiple outlet libraries.[20]

Map 2 shows the distribution of these libraries by legal basis:

Public Library Administrative Entites by Legal Basis Code
48 States & DC; FY 1992


LEGAL BASIS
• CI - Municipal Government (6033)
• CO - County/Parish (1928)
• NP - Association non-profit (557)
• SD - Special Library District (553)
• — All Others (1349)
E. Walter Terrie, Ph.D.

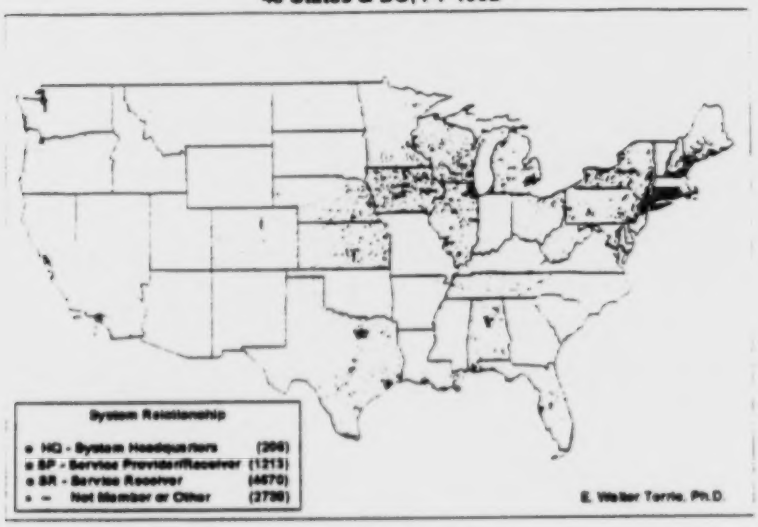
Map 2.

As may be seen, municipal libraries are prevalent in Massachusetts, Vermont, Wisconsin, Ohio, Nebraska, Kansas and Oklahoma. County libraries are common in the South and much of the West. Non profit association libraries abound in New York, Vermont, Connecticut and Rhode Island. Special library districts are utilized extensively in Kentucky, Illinois and Colorado.

[19]Larger versions of these maps are appended to the paper.
[20]The number of cases reported in this and all the other maps does not agree exactly with Tables 1 and 2. This is because the zip code, from which each location is plotted, was not always reported.

The next map shows the distribution of system or federation affiliation across the nation:

Public Library Administrative Entities by System Relationship Code
48 States & DC; FY 1992


System Relationship
HQ - System Headquarters (209)
SP - Service Provider/Receiver (1213)
SR - Service Receiver (4570)
-- Not Member or Other (2738)
E. Walter Terrie, Ph.D.

Map 3.

Inspection of this maps shows that in 20 states almost every library is coded as "not a member" or "other". Some states such as Maine, Michigan, New York and Texas display a pattern of a few system headquarters and a large number of service receiving members. California and Illinois reveal a pattern of a few headquarters and almost all other libraries within the state being members which both receive and provide system services. This map suggests clear differences in library inter-cooperation arrangements across the states. These codes and concepts were, however, new in FY 1992 and these data should be regarded with caution and skepticism.

The remaining two maps show the distribution of public library outlets across the lower 48 states. Map 4 displays information for stationary outlets (centrals and

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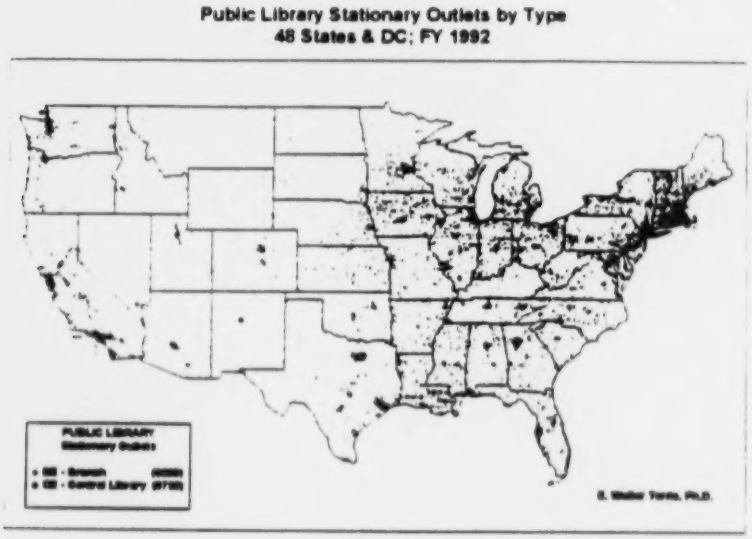
branches) while Map 5 shows bookmobile service administrative locations, not bookmobile stops.

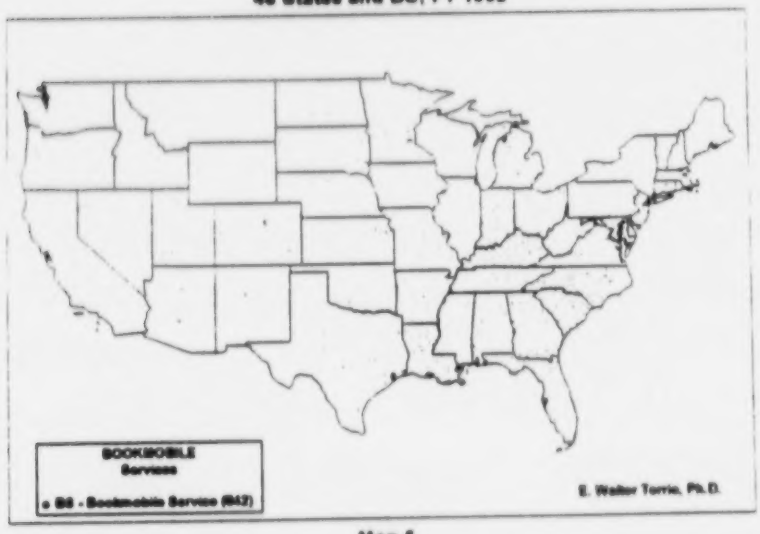


Map 4.

Map 4 shows the distribution of library outlet buildings across the lower 48 states. The map closely resembles a map of population concentrations in the United States and suggests that most of the population has a "local" public library outlet reasonably nearby. The pattern of branches vis-à-vis central libraries is especially interesting. Clearly, metropolitan areas are more likely to be served by large multiple outlet libraries with many branches. This is true even in the Northeast and Illinois where the vast majority of libraries in the state are single outlet types.

Branch libraries are also prevalent in Washington state, California and throughout the South with the exception of Texas, Alabama and Tennessee. The remainder of the nation is much more likely to be served by central libraries of single outlet administrative entities.

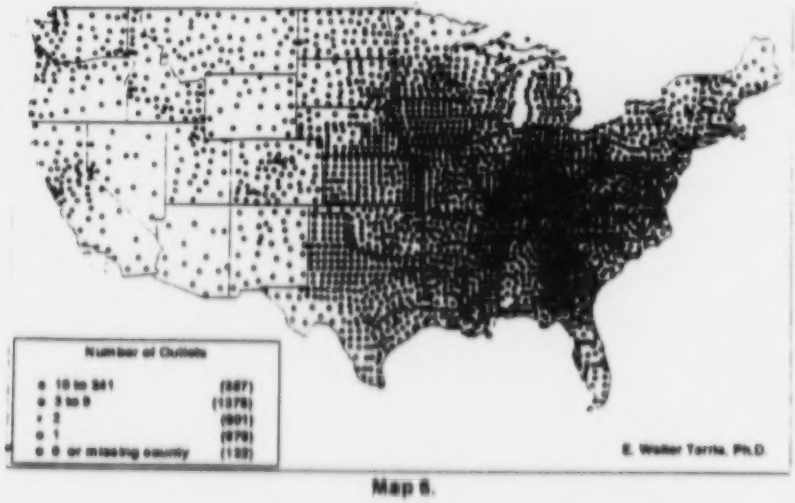
Map 5 shows the administrative address location for each bookmobile service. It is clear that the states of Kentucky, North and South Carolina, Georgia and Louisiana have placed an emphasis on the provision of bookmobile services. Vermont has no bookmobile service. The data for California, which actually has 45 bookmobile services, is incomplete due to non-reporting of the associated zip codes and thus shows only one bookmobile which is not correct. Fortunately, no other map presented in this paper was as adversely affected by missing information. In the last two years, considerable emphasis has been placed on 100% reporting of location information (including nine-digit zip codes) and on population of legal service area. Location information is particularly crucial since imputation of that information would not normally be considered desirable even if it were possible.



Map 5.

Another way to examine the geographic distribution of public library service is to examine the number of service outlets by county or county equivalents within the United States. Map 6 presents this information for the contiquous 48 states.

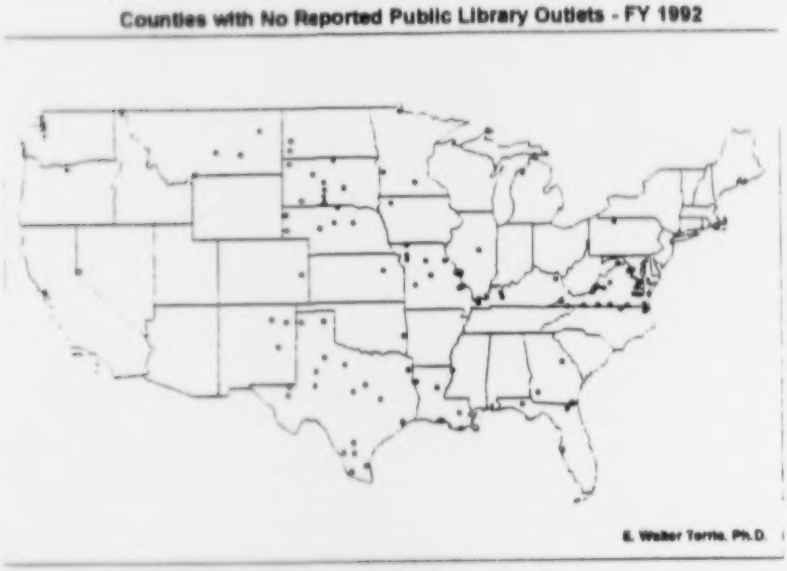
Number of Public Library Outlets by County - FY 1992



Map 6.

Forty-four percent of the 3,141 county or county equivalents have 3 to 9 public library outlets, while another 11% have 10 or more outlets. This patterns of multiple outlets is prevalent throughout New England, Pennsylvania, Ohio, Michigan, Indiana, Wisconsin, Illinois, Iowa, and most of the western states. Two outlet libraries are especially common in Kentucky. Texas, Georgia, Virginia and North Dakota seem to have a large proportion of one or two outlet counties. Obviously, states vary in the size and number of their counties as well as population concentrations, all of which are likely more important explanations of these patterns then planning or policy decisions. However, one topic of considerable interest is the number and location of counties with no reported public library service.

Map 7 shows 105 counties with no reported public library outlets for FY 1992.



Map 7.

South Dakota, Nebraska, Missouri, Texas and Virginia are all states with concentrations of counties or county equivalents with no reported outlets. This map should not be used as an indication of no public library service. Indeed, many of these data points are the result of omission or county name miscoding. For example, in Florida, Washington County is one of the three without reported library service. Actually, this county had three outlets but they are missing from the public library outlet file. In the case of Virginia where there are both counties and independent cities failure to distinguish between, for example, Fairfax County and Fairfax City resulted in Fairfax City appearing on the map as having no outlets when, in fact, it does. The map may be more a reflection of completeness of reporting then of the actual distribution of counties with no public library outlets.

SUMMARY

Public library statistics in America have taken a giant step forward since the genesis of the Federal-State Cooperative for Public Library Statistics five years ago. The number, organization, governance and cooperative support systems vary widely from state to state and even within states, but we now possess the informational resources necessary for describing, analyzing, monitoring and tracking the provision of library services within the nation.

As we have seen, Americans in 1992 were served by 8,946 public libraries in the U.S. through 15,872 library buildings and 1,066 bookmobiles. The maps show distinct regional variations in the administrative structural arrangements, legal basis, cooperative system membership and provision of bookmobile services. Branch library facilities are common in metropolitan areas, California, Washington and throughout the South (excluding Texas, Tennessee and Alabama), while single administrative outlets central libraries are the norm elsewhere.

Public library outlets are reported for all but 105 counties or county equivalents in the lower 48 states. This does not mean that these counties do not have library service or even that they do not have any outlets. Indeed, a number of these 105 are known to have public library outlets. Outlet omissions and county miss-naming account for some of these data points and indicate just how important complete and accurate reporting is, especially when attention is focused on rare events.

As FSCS continues to mature an increased recognition of and adherence to definitions of key concepts by both providers and users of library statistics will rapidly bring us to the point where the annual census will truly and properly reflect the condition of public libraries and permit tracking and monitoring, through time-series analysis, of this important aspect of American education and recreation.

REFERENCES

Census Bureau. 1994. *Report on Coverage Evaluation of the Public Library Statistics Program*. NCES 94-430 report. Washington, DC: Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics.

Chute, Adrienne. 1992. *Public Libraries in the United States.: 1990*. NCES ED-Tab 92-028. Washington, DC: National Center for Education Statistics.

Chute, Adrienne. 1993. *Public Libraries in the United States: 1991*. NCES ED-Tab 93-297. Washington, DC: National Center for Education Statistics.

Chute, Adrienne and Elaine Kroe. 1994. *Public Libraries in the United States: 1992*. NCES ED-Tab 94-030. Washington, DC: National Center for Education Statistics.

LaMoure, Lawrence J. 1988. "Federal/State Cooperative System for Public Library Data." Paper presented at the American Library Association mid-winter meeting, San Antonio, Texas, January 1988.

Lorenz, John, et.al. 1989. *An Action Plan for a Federal-State Cooperative System for Public Library Data*. Washington DC: National Commission on Libraries and Information Science.

National Center for Education Statistics, 1994. *Data Base Documentation: Public Libraries Survey, FY 1992*. Washington, DC.

Podolsky, Arthur. 1989. *Public Libraries in Forty-Four States and the District of Columbia: 1988*. NCES Working Paper. Washington, DC: National Center for Education Statistics.

Podolsky, Arthur. 1991. *Public Libraries in Fifty States and the District of Columbia: 1989*. NCES ED-Tab 91-343. Washington, DC: National Center for Education Statistics.

APPENDICES

Appendix A - State Characteristics Data Element and Instructions, Fiscal Year 1992

Appendix B - Administrative Entity Data Element Definitions and Instructions, Fiscal Year 1992

Appendix C - Outlet Data Element Definitions and Instructions, Fiscal Year 1992

Note: All Appendices are from National Center for Education Statistics. 1994. *Data Base Documentation: Public Libraries Survey, FY 1992.* Washington DC.

Appendix A-State Characteristics Data Element and Instructions, Fiscal Year 1992

Data element number	Data element	Definitions and instructions
01	State	Two-letter state abbreviation automatically assigned by DECPLUS. See Appendix D for list of State Codes.
02	FSCS Submission Year	Submission year of public library data to the National Center for Education Statistics (NCES) under the Federal-State Cooperative System (FSCS). Automatically assigned by DECPLUS.
03	Reporting Period Starting Date	Earliest date (month and year) for a 12-month period that applies to the state's data being submitted to NCES. Note: Reporting period means data for a 12-month period whose fiscal year ended in 1992. If data are collected for several local reporting periods, provide the earliest starting date.
04	Reporting Period Ending Date	Latest date (month and year) for a 12-month period that applies to the state's data being submitted to NCES. Note: Reporting period means data for a 12-month period whose fiscal year ended in 1992. If data are collected for several local reporting periods, provide the latest ending date.
05	Official State Total Population Estimate	Most recent official total population figure for the state that matches the local population figures submitted to NCES. The State Data Coordinator should obtain this figure annually from the State Data Center or other official sources.
05A	Total Unduplicated Population of Legal Service Areas	Total unduplicated population of those areas in your state that receive library services. The population of unserved areas is not included in this figure. Note: A state's actual total population of legal service areas may be different from the total population of legal service areas as calculated by DECPLUS. This happens in states where there are overlaps in population of legal service areas served by individual libraries, resulting in the same population being counted twice in the DECPLUS calculation. For states that have no overlapping jurisdictions, this number will be identical to your state's total population of legal service areas as calculated by DECPLUS. For states which do have overlaps in population of legal service areas served by individual libraries, this number must be calculated separately. Use your state's most recent official state population figures for jurisdictions in your state as the basis for calculating the total unduplicated population of legal service areas.

NOTES:

1. "Data Element Number" is the number of the data item in DECPLUS, the electronic survey and source of the raw data.
2. "Data element" is the name of the data item in DECPLUS.

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Appendix B-Administrative Entity Data Element Definitions and Instructions, Fiscal Year 1992

See notes at end of data element definitions and instructions.

Data element number	Data element	Definitions and instructions
01	LIB ID#	Administrative Entity identification number. This number is assigned by the state; however, if a number is not assigned by the state, NCES assigns the FSCS ID# to this field.
1A	FSCS ID#	NCES-assigned number for the administrative entity.
02	Name	Name of administrative entity. Note: Provide the name of the public library. If the administrative entity is a state library agency or a system (federation), provide its name.
03	Address	Complete street address of administrative entity. Note: If there is not a street address, report the mailing address.
04	City	City or town of administrative entity.
4A	County of the Entity	County in which administrative entity is located.
05	Zip1	Standard five-digit postal zip code for the street address or mailing address of the administrative entity.
06	Zip2	Four-digit postal zip code extension for the street address or mailing address of the administrative entity.
07	Phone	Telephone number of administrative entity, including area code.
7A	Library System Relationship Code	Select one of the following: HQ - Headquarters of a system (federation). The library or entity that provides the physical space and staff who manage, coordinate, or administer the cooperative programs of the system (federation). NO - Not part of a system (federation). SP - System (federation) member that receives and provides system services. A group of autonomous library entities joined together by formal or informal agreements to perform various services cooperatively such as resource sharing, communications, etc. Includes multitype library systems (federations). Does not include a multiple outlet administrative entity. See definition for "MA - Multiple Outlet Administrative Entity (is not an outlet)" under Administrative Structure Code (data element 7C). SR - System (federation) member that receives system services. OT - Other.
7B	Legal Basis Code	The type of local government structure within which the administrative entity functions. Note: For combined libraries (i.e., combined school/ public libraries or academic/public libraries), use the SP or AP codes listed below instead of the other legal basis codes. Select one of the following: CI - Municipal government (city, town, or village). An organized local government authorized in a state's constitution and statutes and established to provide general government for a specific concentration of population in a defined area.

Data element number	Data element	Definitions and instructions
7B	Legal Basis Code--continued from previous page	CO - County/Parish. An organized local government authorized in a state's constitution and statutes and established to provide general government. MJ - Multi-jurisdictional. An entity operated jointly by two or more units of local government under an intergovernmental agreement which creates a jointly appointed board or similar means of joint governance; to be distinguished from a library with contracts to serve other jurisdictions and from special library districts. NP - Non-profit Association or Agency. Privately controlled but meeting the statutory definition of a public library in a given state. Includes association libraries. SC - School District. An organized local entity providing public elementary, secondary, and/or higher education which, under state law, has sufficient administrative and fiscal autonomy to qualify as a separate government. Excludes "dependent public school systems" of county, municipal, township, or state governments. SL - State Library Agency. That agency within each of the states and territories which administers the Federal Library Services and Construction Act funds and which is authorized by a state to develop library services in the state. It may also provide direct services to the public. SD - Special Library District (authority, board, commission). A district, authority, board, or commission authorized by state law to provide library services. SP - Combined School Media Center/Public Library. A library serving as both a school media center and public library which is governed, funded, and operated by one or more legally constituted administrative jurisdictions. AP - Combined Academic/Public Library. A library serving as both a college or university library and public library which is governed, funded, and operated by one or more legally constituted administrative jurisdictions. UK - Unknown.
7C	Administrative Structure Code	Identifies an autonomous library entity that has its own governance and funding. Select one of the following: SO - Single Outlet Administrative Entity. A library entity that serves the public directly with one building, bookmobile, or books by mail. MO - Multiple Outlet Administrative Entiy (is an outlet). A library entity that serves the public directly with more than one service outlet (branch and/or bookmobile). MA - Multiple Outlet Administrative Entity (is not an outlet). A library entity that serves the public directly with more than one service outlet (branch and/or bookmobile). The offices are separate and do not provide direct library services. AO - Administrative Entity Only. A library entity that does not serve the public directly (i.e., no outlets) but may provide staff, materials, and services to other libraries; may receive and spend funds on behalf of other libraries; or may contract with other libraries to provide various library services. Examples are: federated or cooperative System Headquarters and county administrative entities.

Data element number	Data element	Definitions and instructions
08	Population of the Legal Service Area	The number of people in the geographic area for which a public library has been established to offer services and from which (or on behalf of which) the library derives income, plus any areas served under contract for which the library is the primary service provider. figures available from the State Data Center for jusisdictions in your state. The State Data Coordinator should obtain these figures annually from the State Data Center or other official state sources. For administrative entities that do not serve the public directly and have no outlets (e.g., federation or cooperative headquarters), this number shall be zero.
09	Number of Central Libraries	**SERVICE OUTLETS** (Also called main library). The single unit library (SO) or the unit of a "multiple outlet administrative entity (is an outlet)" where the principal collection is maintained. Note: Some county, multi-county, and regional libraries may not have a central library. Some libraries may have a separate administrative office that is not open to the public. These are not reported here.
10	Number of Branch Libraries	An auxiliary unit of an administrative entity which has at least all of the following: 1) separate quarters; 2) an organized collection of library materials; 3) paid staff; and 4) regularly scheduled hours for being open to the public.
11	Number of Bookmobiles	A traveling branch library. It consists of at least all of the following: 1) a truck or van that carries an organized collection of library materials; 2) paid staff; and 3) regularly scheduled hours (bookmobile stops) for being open to the public. Note: Count vehicles in use, not the number of stops the vehicle makes.
12	No longer collected	
		PAID STAFF (FULL-TIME EQUIVALENT) Note: Report figures as of the last day of the fiscal year. Include unfilled but budgeted positions. To ensure comparable data, 40 hours per week has been set as the measure of full-time employment (FTE) for the Federal-State Cooperative System for Public Library Data.
13	ALA-MLS	Librarians with master's degrees from graduate library education programs accredited by the American Library Association.
14	Total Librarians	Persons who do paid work that usually requires professional training and skill in the theoretical or scientific aspects of library work, or both, as distinct from its mechnical or clerical aspect. This data element also includes ALA-MLS (data element 13).
15	All Other Paid Staff	All other FTE employees paid from the reporting unit budget, including plant operations, security, and maintenance staff.
16	Total Paid Employees	The sum of total librarians (data element 14) and all other paid staff (data element 15).
		OPERATING INCOME Note: Report income used for operating expenditures as defined below. Include federal, state, or other grants other than those for major capital expenditures. DO NOT include income for major capital expenditures, contributions to endowments, income passed through to another agency (e.g., fines), or funds unspent in the previous fiscal year.

Data element number	Data element	Definitions and instructions
17	Local Government	Include all tax and non-tax receipts designated by the community, district, or region of the public library and available for expenditure by the public library. It does not include the value of any contributed or in-kind services nor the value of any gifts and donations, fines, or fees.
18	State Government	All funds distributed to public libraries by State government for expenditure by the public libraries, except for federal money distributed by the State. This includes funds from such sources as penal fines, license fees, and mineral rights.
19	Federal Government	Includes all federal government funds distributed to public libraries for expenditure by the public libraries, including federal money distributed by the State.
20	Other Income	All income other than that reported in data elements 17, 18, and 19. Include, for example, gifts and donations received in the current year, interest, library fines, and fees for library services. Exclude the value of any contributed services or the value of "in-kind" gifts and donations.
21	Total Income	Includes income from the local government, the State government, the federal government, and all other income (data elements 17 through 20).
		OPERATING EXPENDITURES Note: Operating expenditures are the current and recurrent costs necessary to the provision of library services.
22	Salaries & Wages Expenditures	The salaries and wages for all library staff, including plant operation, security, and maintenance staff for the fiscal year. Include salaries and wages before deductions but exclude "employee benefits".
23	Employee Benefits	Benefits outside of salaries and wages paid and accruing to employees, including plant operations, security, and maintenance staff, regardless of whether the benefits or equivalent cash options are available to all employees. Include amounts spent by the reporting unit for direct, paid employee benefits, including Social Security, retirement, medical insurance, life insurance, guaranteed disability income protection, unemployment compensation, workmen's compensation, tuition, and housing benefits. Only that part of any employee benefits paid out of the public library budget should be reported.
24	Total Staff Expenditures	Includes salaries and wages (data element 22) and employee benefits (data element 23).
25	Collection Expenditures	Includes all expenditures for materials purchased or leased for use by the public. Includes print materials, microforms, machine-readable materials, audiovisual materials, etc.
26	Other Operating Expenditures	Includes all expenditures other than those reported for staff (data element 24) and collection (data element 25). Note: Include here expenses such as binding, supplies, repair, or replacement of existing furnishings and equipment, and costs incurred in the operation and maintenance of the physical facility.
27	Total Operating Expenditures	Includes total expenditures on staff, total expenditures on collection, and other operating expenditures (data elements 24, 25, and 26).

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Data element number	Data element	Definitions and instructions
		CAPITAL OUTLAY
28	Capital Outlay	Funds for the acquisition of or additions to fixed assets such as building sites, new buildings and building additions, new equipment, initial book stock, furnishings for new or expanded buildings, and new vehicles. Excludes replacement and repair of existing furnishings and equipment, regular purchase of library materials, and investments for capital appreciation. Note: Local accounting practices shall determine whether a specific item is a capital expense or an operating expense, regardless of the examples in the definitions.
		LIBRARY COLLECTION Note: Report physical units for items 29-33. For smaller libraries when volume data are not available, title information may be substituted. Items which are packaged together as a unit, e.g., two compact discs, two films, or two video cassettes, and which are generally checked out as a unit, should be counted as one physical unit.
29	Book/Serial Volume	Books are non-periodical printed publications bound in hard or soft covers, or in loose-leaf format, of at least 49 pages, exclusive of the cover pages; or juvenile non-periodical publications of any length found in hard or soft covers. Serials are publications issued in successive parts, usually at regular intervals, and as a rule, intended to be continued indefinitely. Serials include periodicals (magazines), newspapers, annuals (reports, yearbooks, etc.), memoirs, proceedings, and transactions of societies. Except for the current volume, count unbound serials as volumes when the library has at least half of the issues in a publisher's volume.
30	Audio	Materials on which sounds (only) are stored (recorded) and that can be reproduced (played back) mechanically or electronically, or both. Included are records, audiocassettes, audio cartridges, audiodiscs, audioreels, talking books, and other sound recordings.
31	Films	The term film is used interchangeably with "motion picture" which is a length of film, with or without recorded sound, bearing a sequence of still images that create the illusion of movement when projected in rapid succession (usually 18 or 24 frames per second). Motion pictures are produced in a variety of sizes (8, super 8, 16, 35, 55, and 70 mm) and in a variety of forms (cartridge, cassette, loop, and reel).
32	Video	Materials on which pictures, sound, or both are recorded. Electronic playback reproduces pictures, sound, or both using a television receiver or monitor.
33	Subscriptions	Include subscriptions received, both purchased and as gifts. The count does not include the number of individual issues, but rather, each serial title. The total number of subscriptions in the library system, including duplicates, is included.
34	No longer collected.	
		PUBLIC SERVICE HOURS
35	Public Service Hours Per Year	The sum of annual public service hours for outlets. Note: Include centrals (data element 9), branches (data element 10), and bookmobiles (data element 11). For bookmobiles, report only the hours during which the bookmobile is open to the public. Minor variations in scheduled public service hours need not be included.

Data element number	Data element	Definitions and instructions
		LIBRARY SERVICES Note: If annual counts are available for data elements 36 and 38, please report them. Otherwise, provide annual estimates based on a count taken during a typical week in October, and then multiply that number by 52. A "typical week" is a time that is neither unusually busy nor unusually slow. Avoid holiday times, vacation periods for key staff, and days when unusual events are taking place in the community or in the library. Choose a week in which the library is open its regular hours. Include seven consecutive calendar days, from Sunday through Saturday, or whenever the library is usually open.
36	Attendance	The total number of persons per year entering the library, including persons attending activities, meetings, and those persons requiring no staff services.
37	No longer collected	
38	Reference Transactions	An information contact which involves the knowledge, use, recommendations, interpretation, or instruction in the use of one or more information sources by a member of the library staff. The term includes information and referral service. Information sources include printed and non-printed materials, machine-readable databases (including computer-assisted instruction), catalogs and other holdings, records, and through communication or referral, other libraries and institutions and persons both inside and outside the library. When a staff member utilizes information gained from previous use of information sources to answer a question, report as a reference transaction even if the source is not consulted again during this transaction. Note: It is essential that libraries do not include directional transactions in the reporting of reference transactions. A directional transaction is an information contact which facilitates the use of the library in which the contact occurs but does NOT involve the knowledge, use, recommendation, interpretation, or instruction in the use of any information sources other than those which describe that library, such as schedules, floor plans, handbooks, and policy statements. Examples of directional transactions include giving instruction for locating within the library, staff, library users, or physical features, etc., and giving assistance of a non-bibliographical nature with machines.
39	Total circulation	**CIRCULATION** Transactions that involve lending an item from the library's collection or borrowed from another library for use generally (although not always) outside the library. This activity includes charging materials manually or electronically. Each renewal is also reported as a circulation transaction. These data are reported as annual figures. Note: This count should not include items checked out to another library, i.e., interlibrary loans.
40	Loan To	**INTER-LIBRARY LOANS** Library materials, or copies of the materials, lent by one library to another upon request. The libraries involved in inter-library loans are not under the same library administration. These data are reported as annual figures.
41	Loan From	Library materials, or copies of the materials, borrowed by one library from another library upon request. The libraries involved in inter-library loans are not under the same library administration. These data are reported as annual figures.

Appendix B-Administrative Entity Data Element Definitions and Instructions, Fiscal Year 1992

Data element number	Data element	Definitions and instructions
		CIRCULATION OF CHILDREN'S MATERIALS AND CHILDREN'S PROGRAM ATTENDANCE
42	Circulation of Children's Materials	The total circulation of all children's materials in all formats to all users. Includes renewals.
43	Children's Program	The count of the audience at all programs for which the primary audience is children. Includes adults who attend programs intended primarily for children. Note: Output Measures for Public Library Service to Children: A Manual of Standardized Procedures (ALA, 1992) defines children as persons age 14 and under.

NOTES:

1. "Data Element Number" is the number of the data item in DECPLUS, the electronic survey.

2. "Data element" is the name of the data item in DECPLUS.

3. Public Library. Definition: A public library is established under state enabling laws or regulations to serve the residents of a community, district, or region. A public library is an entity that provides at least the following: 1) an organized collection of printed or other library materials, or a combination thereof; 2) a paid staff to provide and interpret such materials as required to meet the informational, cultural, recreational, and/or educational needs of a clientele; 3) an established schedule in which services of the staff are available to clientele; and 4) the facilities necessary to support such a collection, staff, and schedule. Note: State law determines whether an entity is a public library.

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Appendix C-Outlet Data Element Definitions and Instructions, Fiscal Year 1992

See notes at end of data element definitions and instructions.

Data element number	Data element	Definitions and instructions
01	LIB ID#	Outlet identification number. This number is assigned by the state; however, if a number is not assigned by the state, NCES assigns the FSCS ID# to this field.
01A	FSCS ID#	Number assigned by National Center for Education Statistics (NCES). Outlets of an administrative entity have the same FSCS identification number as the administrative entity, plus a unique three-digit suffix identifying the outlet.
02	Name	Name of outlet.
03	Address	Complete street address of outlet. Note: If there is no street address, report the mailing address.
04	City	City or town of outlet.
05	County	County in which outlet is located.
06	Zip1	Standard five-digit postal zip code for the street address or mailing address of outlet.
07	Zip2	Four-digit postal zip code extension for the street address or mailing address of outlet.
08	Phone	Telephone number of outlet, including area code. Note: Report telephone number without spacing or punctuation.
09	Outlet Type Code	An outlet is a unit of an administrative entity that provides direct public library service. Select one of the following: BR - Branch Library. An auxiliary unit of an administrative entity which has at least all of the following: 1) separate quarters; 2) an organized collection of library materials; 3) paid staff; and 4) regularly scheduled hours for being open to the public. BS - Bookmobile Service. An auxiliary public service unit consisting of one or more bookmobiles. A bookmobile is a traveling branch library. It consists of at least all of the following: 1) a truck or van that carries an organized collection of library materials; 2) a paid staff; and 3) regularly scheduled hours (bookmobile stops) for being open to the public. CE - Central Library (also called Main Library). The single unit library (SO) or the unit of a "multiple outlet administrative entity (is an outlet)" (MO) where the principal collection is maintained. Note: Some county, multi-county, and regional libraries may not have a central library. Some libraries may have a separate administrative office that is not open to the public. These are not reported here.

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Data element number	Data element	Definitions and instructions
10	Metropolitan Status Code	Select one of the following: CC - Within the city limits of the central city of a Metropolitan Area. The largest central city and, in some cases, up to two additional central cities are included in the title of the Metropolitan Area; there also are central cities that are not included in a Metropolitan Area title. A Metropolitan Area central city does not include any part of that city that extends outside the Metropolitan Area boundary. NC - Metropolitan Area, but not within central city limits. A large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that nucleus. Some Metropolitan Areas are defined around two or more nuclei. Each Metropolitan Area must contain a place with a minimum population of 50,000 or a Census Bureau-defined urbanized area and a total Metropolitan Area population of at least 100,000 (75,000 in New England). A Metropolitan Area comprises one or more central counties. (Independent cities are considered county equivalents.) A Metropolitan Area may also include one or more outlying counties that have close economic and social relationships with the central county. An outlying county must have a specified level of commuting to the central counties and also must meet certain standards regarding metropolitan character, such as population density, urban population, and population growth. In New England, Metropolitan Areas are composed of cities and towns rather than whole counties. NO - Not in a Metropolitan Area. UK - Unknown
11	Population of the Legal Area by Outlet	The estimate of the portion of the legal service area population targeted for services by the outlet. Select one of the following ranges: A - 1-999 B - 1,000 - 2,499 C - 2,500 - 4,999 D - 5,000 - 9,999 E - 10,000 - 24,999 F - 25,000 - 49,999 G - 50,000 - 99,999 H - 100,000 - 249,999 I - 250,000 - 499,999 J - 500,000 or more U - Unknown

Appendix C-Outlet Data Element Definitions and Instructions, Fiscal Year 1992

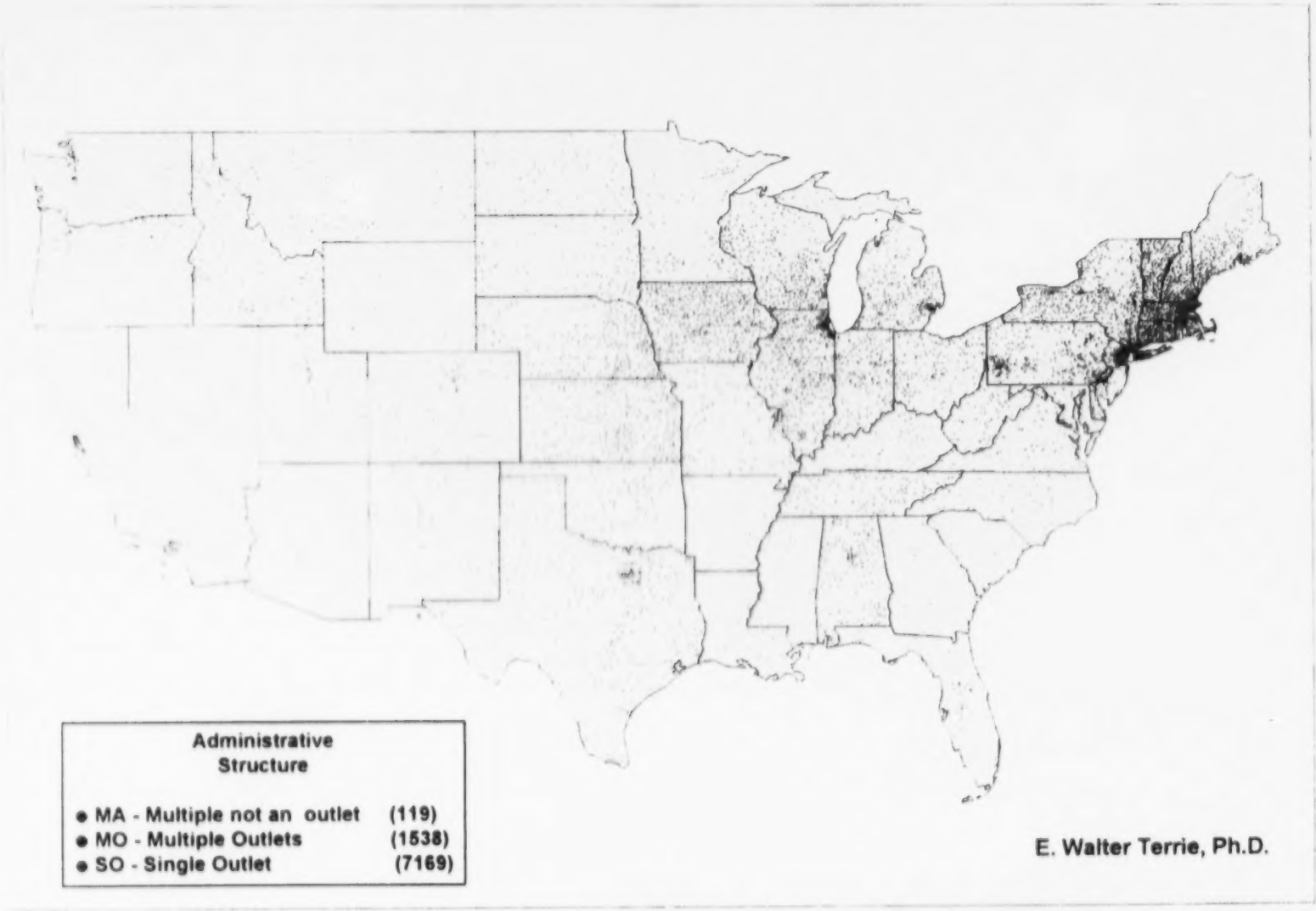
Data element number	Data element	Definitions and instructions
12	Number of Bookmobiles in the Bookmobile Service	Number of bookmobiles used in each bookmobile service. Note: A bookmobile service is an auxiliary public service unit consisting of one or more bookmobiles. A bookmobile is a traveling branch library. It consists of at least all of the following: 1) a truck or van that carries an organized collection of library materials; 2) a paid staff; and 3) regularly scheduled hours (bookmobile stops) for being open to the public. Count vehicles in use, not the number of stops the vehicle makes. Note: This data element is completed only if the outlet has a bookmobile service. If the outlet has more than one bookmobile service, provide the number of bookmobiles in each.

NOTES:

1. "Data Element Number" is the number of the data item in DECPLUS, the electronic survey.

2. "Data element" is the name of the data item in DECPLUS.

Public Library Administrative Entities by Administrative Structure
48 States & DC; FY 1992


Administrative Structure
MA - Multiple not an outlet (119)
MO - Multiple Outlets (1538)
SO - Single Outlet (7169)
E. Walter Terrie, Ph.D.

Map 1.

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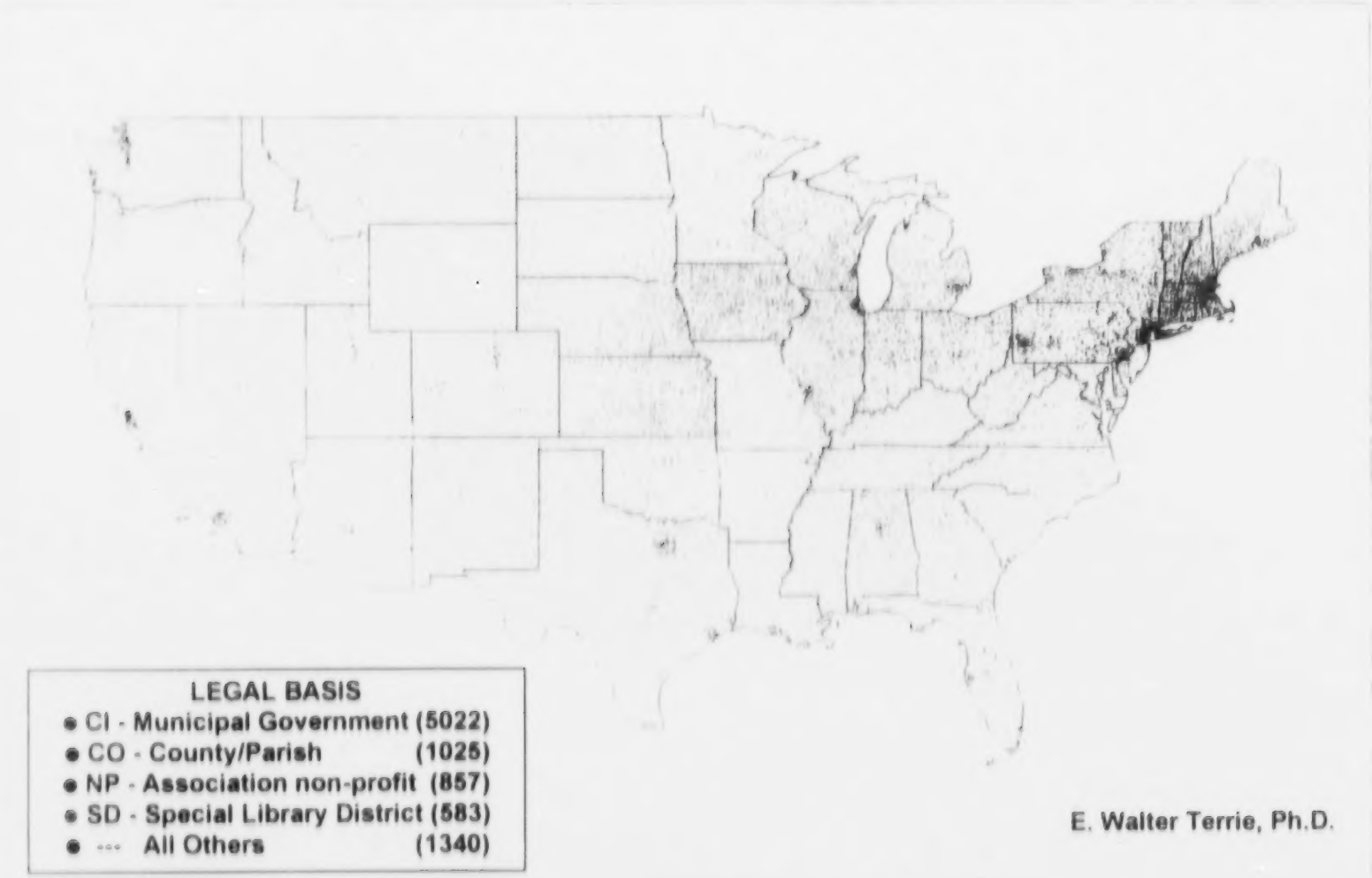
Public Library Administrative Entites by Legal Basis Code
48 States & DC; FY 1992


LEGAL BASIS
• CI - Municipal Government (5022)
• CO - County/Parish (1025)
• NP - Association non-profit (857)
• SD - Special Library District (583)
• ... All Others (1340)
E. Walter Terrie, Ph.D.

Map 2.

Public Library Administrative Entites by System Relationship Code
48 States & DC; FY 1992

System Relationship

- HQ - System Headquarters (206)
- SP - Service Provider/Receiver (1213)
- SR - Service Receiver (4670)
- -- Not Member or Other (2738)

E. Walter Terrie, Ph.D.

Map 3.

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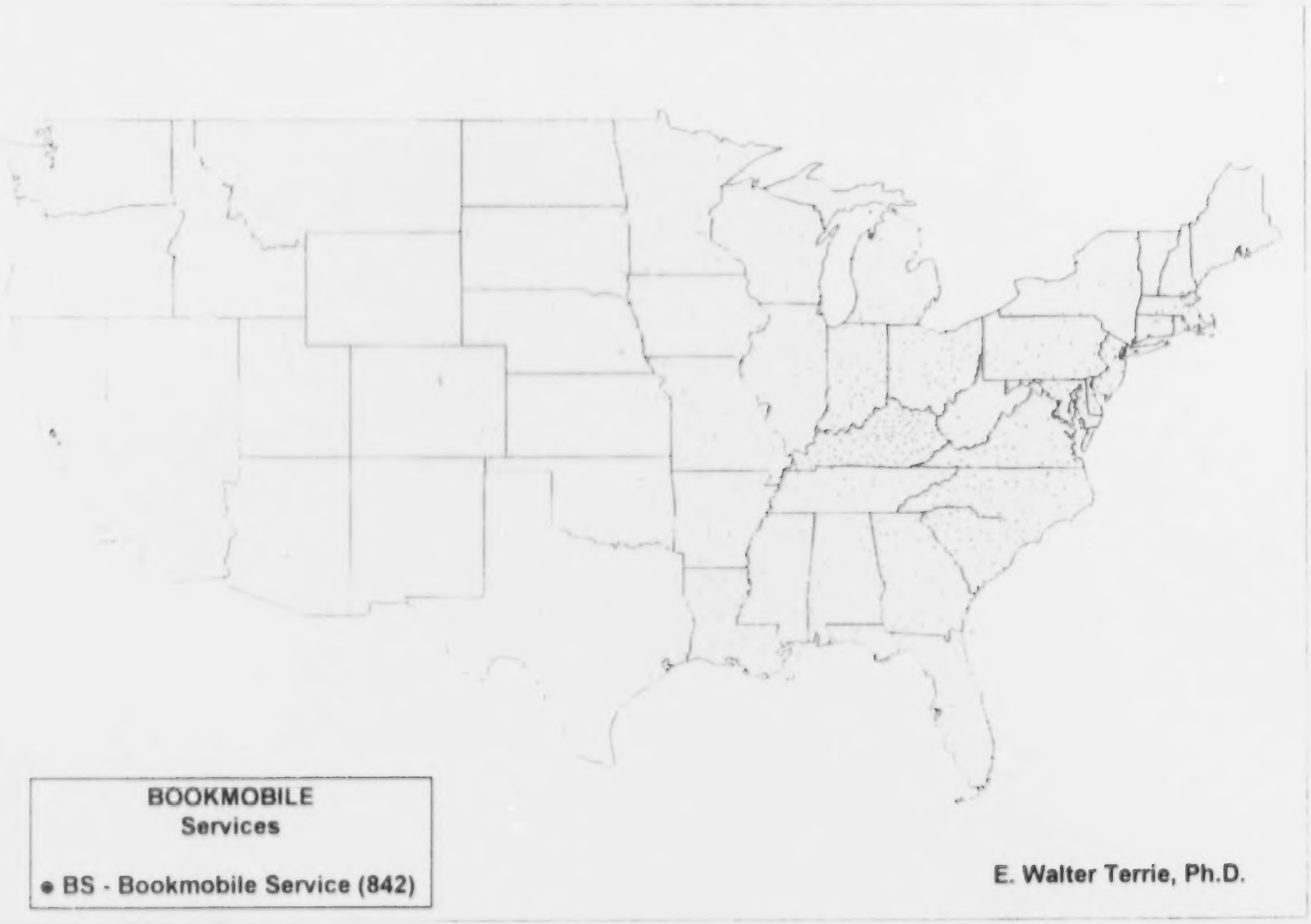
Public Library Stationary Outlets by Type
48 States & DC; FY 1992

Map 4.

Public Library Bookmobile Service
48 States and DC; FY 1992



Map 5.

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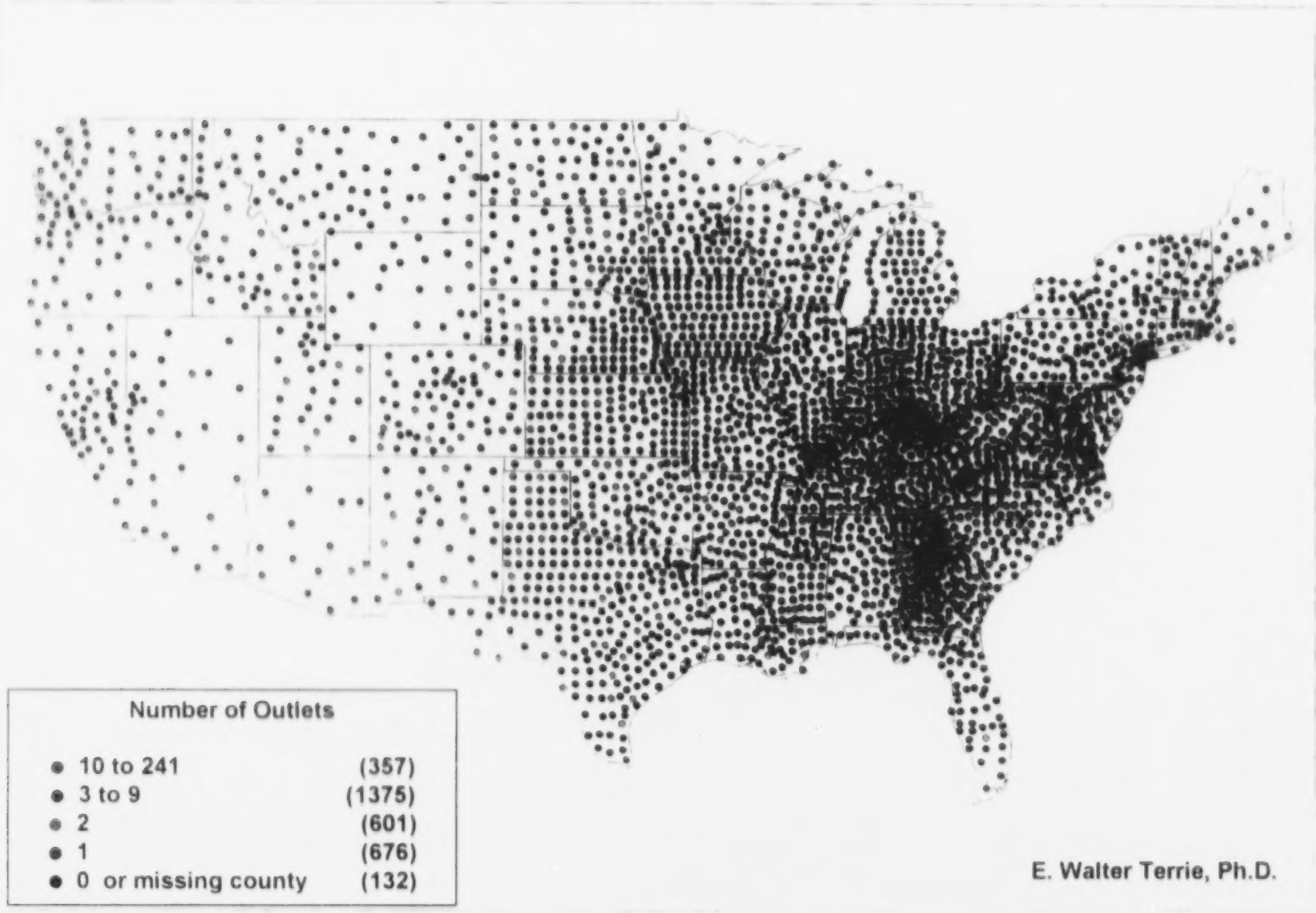
Number of Public Library Outlets by County - FY 1992



Map 6.

Counties with No Reported Public Library Outlets - FY 1992

Map 7.

A STUDY IN LIBRARY STRUCTURE AND ORGANIZATION AND THEIR RELATIONSHIP TO THE CENSUS OF GOVERNMENTS

By

Stephen D. Owens
Governments Division
Bureau of the Census

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I. The Census of Governments

The Census of Governments is conducted every five years with the goal of collecting statistics on all facets of the public sector. The universe of the census includes all state and local governments. Several types of information are collected including statistics on governmental financing, employment and organization.

The Census collects detailed information on several governmental activities such as education, water supply, streets and highways, hospitals, fire protection, and, of course, libraries. The 1967 Census marked the first appearance of published library statistics in all major areas of the Census of Governments.

Besides the 50 state governments the Bureau recognizes 5 types of local governments, namely, Counties, Municipalities, Townships, School Districts, and Special Districts. The first three types of governments are deemed "general purpose" governments, that is they perform general governmental services. The latter two types are deemed "special purpose" governments, and are created to perform a specific governmental function(s). All 5 of these types of governments may perform library services.

The Census Bureau uses several criteria in determining whether an entity is an independent government, or a component unit of an independent government. The ultimate goal of the application of these criteria is to include <u>all</u> activities of the public sector, while excluding private sector activity.

The Bureau uses three major criteria in deciding what constitutes an independent government:[1]

First a government must be an **organized entity**. Statutory terms such as "public or municipal corporation", "political subdivision", and "body corporate and politic" suggest that an entity has some form of formal organization. The government must also have some corporate powers such as the power to enter into contracts, hire employees, and acquire and dispose of property.

Second a government must possess **"governmental character"**. This characteristic is present when officers of the entity are popularly elected or appointed by public officials. Requirements that the entity comply with public records and open meetings laws also suggest governmental character. Entities that do not possess this attribute are generally classified as private, and

are excluded from the governmental sector.

Third a government must possess **substantial autonomy**, both fiscal and administrative in order to be classified as an independent government. Fiscal independence is generally linked to the ability of a government to determine its own budget and raise its own revenue. Administrative independence is linked to the method of selection of the governing body of the entity. This factor is present when the governing body is elected, or represents two or more state or local governments, but may be present in cases where the governing body is wholly appointed by another government, as long as it performs functions that are essentially different from those and not subject to specification by its appointing authority.

An entity which meets all three criteria is classified as an independent government. Entities that do not meet all three criteria, but are deemed to possess governmental character, are generally classified as component units of an independent government often referred to as "dependent agencies" of independent governments.

II. HISTORY

In order to understand library structure and its relationship to the Census of Governments it is necessary to understand a little bit about the history of the public library.

Libraries in the mid to late 19th century were generally formed by individuals, groups or churches as private membership corporations. Typically they were initially financed by a private gift or endowment. Often these libraries did not have their own facilities, but were headquartered in existing schools, churches, businesses, private residences, public buildings, or wherever they could obtain space. Users were commonly required to be members and pay membership fees. Some libraries held weekly book auctions where individuals would bid for the privilege of borrowing books. Libraries were not traditionally viewed as a function of local government, as developing cities and towns were more concerned with the provision of essential services such as sewers or streets.

The idea of the modern "public library" can probably be attributed to Andrew Carnegie. Between 1881 and 1917 Carnegie funded the construction of 1,679 libraries.[2] Frequently Carnegie required the local governments benefited by the libraries to establish an ongoing funding mechanism as a condition of the grant. Several other libraries were established during this period as a result of similar gifts by other wealthy individuals, often with similar types of conditions attached to the gift.

Thus, Carnegie, and others made a significant contribution in the evolution of the public library in this country. Presently what was once viewed as a privilege is now viewed as a right of

every citizen.

Other significant historical developments have shaped the evolution of the public library. After the end of World War II public library resources tended to be greatest in large metropolitan areas, while rural areas generally lacked the resources to provide adequate library services to their citizens. As a result, many small libraries began to enter into agreements with larger libraries, and with each other to pool their resources and provide better service to their citizens. This was accomplished through such mechanisms as interlibrary loans, bookmobiles, consolidation of card catalogues, and coordinated purchasing and procurement among libraries. Typically a separate library "network" or "cooperative" was formed to facilitate these tasks. In other cases libraries actually consolidated to form county and regional library systems under a single governance.

As technology advances entire collections will be placed on-line, and will be accessed by anyone with a personal computer. The public library as we know it today may be quite different in the next century.

III. STRUCTURE

It seems that there are almost as many different governing structures for public libraries as there are libraries. While a few states have very uniform laws governing public libraries, most states authorize a wide variety of public library structures. In Hawaii, for example, all public libraries are governed by the state board of education, while in New York every library is governed under a unique, individual charter issued by the state.

Throughout the course of my research I began to see basic patterns of public library structure. I have identified what I consider the predominant types below. Keep in mind that these are generalities, and specific structures may vary from state to state.

County Libraries: These libraries are generally created to serve an entire county, or, commonly, all portions of a county not receiving library service from another public library (i.e., Municipal, Township, School District, or Special District). They are generally created by resolution of a county governing body, or by petition of voters to the county and approval at referendum. Many are governed by boards of trustees appointed by the county governing authority. They are usually financed by a county property tax, which may or may not require voter approval.

Regional Libraries: These libraries are created to serve more than one local government area, often encompassing two or more counties. They are usually created by a joint resolution or contract of the governments involved, but may, sometimes, be

created by a state library agency. They are commonly governed by boards of trustees appointed by the participating governments, but may have popularly elected boards in some cases. They ordinarily obtain funding through contributions by member governments.

Municipal and Township Libraries: These libraries are generally created to serve a specific municipality or township. They may be established by the local governing body, or by petition of voters and referendum. Many are governed by appointed boards of trustees, but occasionally the trustees may be elected. They are typically financed through a property tax that typically requires voter approval.

School Community Libraries: These libraries are set up to serve both a school system and the general public. This is a popular arrangement in the Midwest, but these types of libraries are found in more than half the 50 states. There are several methods by which these entities may be created. They are generally governed by a school board, ex officio, or a board of trustees appointed by the school board, but may have elected boards, or boards appointed jointly by other governments in some cases. Funds are usually derived from a school district property tax, but may also come from local government contributions. These types of libraries are perhaps the most diverse of all in structure.

Library Districts: These libraries are generally set up to serve a specific area that is typically not coterminous with another unit of local government. They are usually created by petition and referendum, and governed by elected boards of trustees, but provisions vary widely from state to state. Several of these types of districts have been created by special acts of the various state legislatures. These districts are usually financed through a special property tax levy approved by the voters.

Association Libraries: It might be said that these libraries are throwbacks to an earlier era. These libraries are often formed by a gift, bequest, or will. Although established to serve the public, they are often governed by boards of trustees that are predominantly self-perpetuating, and not accountable to the public. Occasionally boards are elected by the library's "membership". They are generally funded through a combination of public and private funds. Often the specific funding mechanism is set out in the original instrument creating the library. Many libraries that were originally established in this fashion have since converted to other types of public libraries. Notable association libraries include the New York City Public Library, and the Carnegie Library in Pittsburgh.

Joint Libraries: These are libraries that are typically set up to serve two governments, often a city and county, but may serve several jurisdictions. They are generally created under a contract, but several other methods of creation are authorized in

certain states. Usually they are governed by boards of trustees appointed by the local governments they serve. Funding is usually obtained from contractual appropriations, but may involve a special property tax in some jurisdictions.

Library Cooperatives: These organizations generally provide no direct library service. Instead they are formed to foster cooperation and coordination of resources of existing libraries. Their membership may include academic, and special libraries as well as public libraries. They are typically formed by a cooperative agreement between the libraries involved, often with strong assistance by the state library agency. Usually they are governed by a board consisting of representatives of the member library boards, and may have executive committees when the size of the board is prohibitive. They are often funded through contributions by member libraries, and state grants.

IV. Library Structure as it Relates to the Census of Governments

The lack of uniformity in library structure presents many challenges for data classification and collection in the Census of Governments. Service delivery of most public services is provided under rather uniform procedures, both within a particular state, and among different states. This generally makes data collection a relatively easy task, with few variables to consider. Library service delivery, on the other hand, lacks uniformity within many states, not to mention among different states. This is probably due in part to the history of the institution of the public library, and the unwillingness of many libraries to surrender their unique identities.

The question before us now is "How do public libraries fare in the classification system for the Census of Governments?". In order to answer this we must put the public library entities through the three major criteria mentioned earlier.

1. Existence as an organized entity:

Most of the public libraries will pass the first test. Entities that would fail are those libraries that are administered as a department of a local government. For example, a county library system that has no board of trustees, and is administered directly by the county. Often the employees of these systems are hired directly by the county under its personnel system, and the detailed finances of these systems are included in the county budget. Entities that fail this first test are generally classified as dependent agencies of the government they serve.

2. Governmental Character:

This is perhaps the most difficult test for "public" libraries. Many association libraries will fail this test

because their boards of trustees or either wholly, or mostly self-perpetuating. Even in cases where the boards of these libraries are elected, the election is generally limited to "members" of the library, and not specifically open to the general populace. This type of arrangement clearly avoids public accountability and by Census Bureau standards these libraries are <u>private</u> organizations. Association libraries whose boards or appointed in whole, or in majority by public officials typically pass this test.

3. Substantial Autonomy:

The test of administrative autonomy is often fairly straightforward when dealing with public libraries as most libraries have clearly defined administrative structures. The test of fiscal autonomy on the other hand is not always as clear. Obviously in situations where another government has the power to review and modify library budgets, adequate fiscal autonomy is not present. In situations where libraries levy their own taxes and/or otherwise raise their own revenue fiscal autonomy is generally present. Problems arise in cases where libraries derive most of their revenue from another government, but are not subject to budgetary controls by that government. Generally an entity that obtains most of its funds from another government is classified as a dependent agency of that government. This being the case, the Bureau must rely on the parent government to provide the data for the library. As we will see later, this can cause many problems.

V. Library Structure and the Havoc it Wreaks on the Census of Governments

As noted earlier the diverse structure of public libraries in the United States presents many problems in Census of Governments data collection and reporting. I will attempt to detail some specific problems posed by each basic type of structure using concrete examples from the 1987 Census of Governments.

County libraries generally pose no problems in Census data collection. In a few cases, however local attitudes may cause problems. This is especially true for libraries that are funded by voter approved tax levies. For example, in the state of Montana, the Bureau classifies county libraries as county agencies. The Montana Attorney General has ruled, however, that a county's role in library financing is purely "ministerial," and the county has no administrative control over library financing.[3] Attitudes such as this often result in a catch 22 situation. If the Bureau maintains its present classification of county libraries in this state several counties may fail to report these agencies. If, on the other hand, the Bureau reclassifies these entities as independent governments, data for all libraries will be obtained, but double counting may occur due to reporting by some counties.

Regional libraries vary widely in structure. In states where the Bureau has classified them as independent governments, they generally pose no problems. On the other hand classification of these entities as dependent agencies poses several problems. In the first place these libraries tend to serve several local governments, often over several county areas. Bureau procedures specify that a dependent agency must be assigned to a single government. Therefore, the data for these entities may be blown out of proportion for one jurisdiction, and may be totally absent in another. This classification generally causes reporting problems because the member governments do not generally see themselves as responsible for the library. This, of course, can work in reverse, if several governments claim responsibility for the same library. A good example of the problems regional libraries pose can be found in the state of Mississippi. Most of the library service in this state is provided through regional libraries. In the 1987 Census Mississippi ranked last in library employees per capita and 48th in library expenditure per capita.[4,5] The problem was caused by a lack of reporting by the local governments who were members of these regional systems. (Editors Note: The Mississippi legislature restructured these libraries through 1988 legislation, and they are now classified by the Bureau as independent governments). Similar situations exist in states such as Arkansas and Alabama, and South Carolina to name only a few.

Municipal and township libraries pose many of the same problems as county libraries. In addition the more "local" nature of these libraries can result in further problems. Nowhere is this more apparent than in Pennsylvania. Andrew Carnegie's home state ranked a dismal 40th in government finance per capita and 43rd in local government employees per capita![4,5] This problem may be caused by the fact that many libraries in Pennsylvania are organized as nonprofit corporations. Municipalities and townships tend to view these libraries as separate entities though they may control the budgets and appoint the boards of these libraries! It is also very difficult to make an accurate classification of this type of library, as each entity is governed by unique provisions contained in its articles of incorporation. To <u>accurately</u> classify libraries in Pennsylvania, each library would have to be considered on an individual basis. Other states such as New York pose similar problems.

School Community Libraries pose few classification problems, but data collection for these units tends to be rather difficult, especially in cases where these libraries are classified as dependent agencies of school districts. Employment data for school districts is collected by canvassing each individual government. Finance data, on the other hand, is obtained centrally through state sources for all school districts in a given state. An assumption has been made that by obtaining finance data in this manner the Bureau obtains a complete picture of each state. While this may be true one only needs to look at

the state of Ohio to see a problem with this approach. In the 1987 Census school districts reported 3,514 paid public library employees.[4] In the same census, published financial statistics show that school districts expended zero dollars in support of public libraries.[5] If, in fact, the Bureau is obtaining library expenditure data for schools it must be misplaced. This problem can be seen in other states that have similar situations such as California, Missouri, and Kansas to name a few.

Library Districts usually pose the fewest problems in Census classification and data collection. Generally these districts are recognized as independent entities in the states where they exist. The main data collection and classification problems occur in states, such as Illinois, where these districts tend to convert back and forth from municipal libraries to districts.

Association libraries present perhaps the biggest challenge to Census Bureau classification. Generally these libraries receive a great deal of public funding, but usually they lack the "governmental character" to be classified as public. They are often governed by boards of self-perpetuating trustees and established as nonprofit corporations. These types of libraries exist in several states, but the largest concentration, by far, is in the New England, and Middle Atlantic states. The major problem with data collection for these types of libraries is making sure that they are excluded from governmental statistics. This is not an easy task, as they are often closely tied to a unit of local government, and often reported by that unit as if the library were its own. Not all association libraries are classified as private. Several of these types of libraries may be organized in a way that is classified as governmental. For example a municipality may appoint most of the board or have control over the budget of the library. This tends to complicate the situation further and accurate classification requires examination on a case by case basis. These types of libraries not only present a problem for the Bureau but cause strife among the library community, itself. The American Library Association's Public Libraries Division Coordinating Committee recommended in 1956 that "every public library should be controlled by a public body or official, appointed or elected under public legal authority, and responsible to the local government".[6]

Joint libraries present many of the same problems as regional libraries. Additional problems typically relate to double counting when both governments involved claim the library as their own.

Library cooperatives often do not fit the mold of the "traditional" independent government by Census standards. Nevertheless, because of the sheer number of governments involved in forming these entities, and the difficulty in applying the dependent agency approach to them, many have been classified as independent special districts. This approach seems to work well

and double counting is usually not a problem. The major hurdle I encountered with this type of library was the fact that typically these entities had never come to the attention of the Bureau.

VI. Recommendations

The major problems with the collection and reporting of library statistics are identification, classification, and consistency. I have included some suggestions that may help ease these problems.

The problem of identification has probably been caused by unfounded assumptions about library structure. This has not been a well-researched area in the past. In many states a library carrying the name of a county or municipality was assumed to belong to that particular local government. Library cooperatives have generally been overlooked probably because they are not known for providing library service in the traditional sense. Association libraries have been largely overlooked because of their unique nature.

Fortunately this problem has been solved in many states through the effort of this project and in connection with the library survey conducted by the National Center for Education Statistics. We have obtained detailed sources from several states that clarify the existence and structure of libraries in their jurisdiction. This has proven to be of great utility in identifying the public library universe.

The problem of classification is a difficult one. Obviously in states such as Pennsylvania, and New York an accurate classification would entail going through the charters or articles of incorporation of each individual library, a prohibitive task, at best. This type of problem also exists with regional and joint libraries, and library cooperatives where state statutes are inconclusive, and the entity is created under some sort of formal agreement. A possible solution to this problem would be a separate survey in problem states aimed at obtaining critical information about a library's governing structure.

In many cases entities created under similar legislation may be classified differently from state to state, due to local attitudes, and data collection problems. In New York City for example, the New York Public Library (Private by Census standards) has been classified as a public agency, while the Carnegie Library in Pittsburgh (Private by Census standards) has been classified as a private entity. Statutory definitions of the term "public library" vary widely from state to state. An entity which may be considered private by one state may be defined as public in another.

Consistency in Census of Government statistics is a problem not only for libraries, but also for every other type of public

service. No comprehensive effort has been made to coordinate comparison of statistics from all phases of the Census including employment, financial and organizational statistics. As technology improves these types of comparisons will become commonplace. In the meantime I suspect that there are several situations similar to the one involving Ohio libraries scattered all about the Census of Governments.

Besides a lack of consistency within the Census of Governments there is a lack of coordination between the Census of Governments and other economic Censuses. The public vs. private debate applies to other areas beyond libraries. No recent attempts have been made to insure that the universe of the Census of Governments does not overlap the universes of some "private" economic Censuses.

End Notes

[1] 1987 Census of Governments, "Government Organization," Vol. I No. 1

[2] Swanson, Stevenson (1985), "Carnegie Legacy Built on a Need for Knowledge," Chicago Tribune, November 25, 1985.

[3] 1986 Montana Attorney General's Opinion Number 91, November 13, 1986.

[4] 1987 Census of Governments, "Compendium of Public Employment," Vol. III No. 2

[5] 1987 Census of Governments, "Compendium of Government Finances," Vol IV No. 5

[6] American Library Association, Public Libraries Division Coordinating Committee, "Second Preliminary Statement of Revised Standards for Public Libraries," March, 1956.

Disclaimer:

This paper reports the general results of research undertaken by Census Bureau staff. The views expressed are attributable to the author and do not necessarily reflect those of the Census Bureau.

EVALUATING COVERAGE IN THE PUBLIC LIBRARY STATISTICS PROGRAM

Prepared by: David Kellerman
Governments Division
Bureau of the Census*

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* This paper reports the general results of research undertaken by Census Bureau staff. The views expressed are attributable to the author and do not necessarily reflect those of the Census Bureau.

INTRODUCTION

The Bureau of the Census is conducting an evaluation of the library statistics programs managed and coordinated by the National Center for Education Statistics (NCES). These NCES statistical programs cover public libraries, special libraries, academic libraries, and state library agencies. This paper describes partial results of this work, relating to the evaluation of coverage in the Public Library Statistics (PLS) program.

The PLS program is an annual collection and tabulation of general statistics about public libraries. It was described as a census in the NCES publication *Public Libraries in the United States: 1991*. I would go further, and characterize it as a collection of state censuses. Each covers the same topic, but with slight variation as to composition of the statistical entities (the public libraries) being canvassed within each state. This design was intentional, both to accommodate the states as data users and to facilitate reporting to the NCES. Statistics are collected for several categories of variables. These include basic identifying information (such as the number of public libraries), size indicators (such as their number and types of holdings), and selected service measures (such as hours, population served, and circulation).

The annual NCES public library dataset contains the complete set of variables for each public library (as defined by the NCES) in the Nation. The coverage evaluation conducted by the Census Bureau was of the public libraries found in the 1991 NCES dataset. The NCES was interested in finding answers to two general questions:

1. Given the definition of public libraries, how accurate is the coverage in the PLS?

2. How many libraries exist, but fall outside the scope of the definition and are therefore excluded from coverage?

METHODOLOGY FOR EVALUATING COVERAGE

Identifying the Universe of Public Libraries

The essential component of the coverage evaluation involved comparing the 1991 NCES public library dataset to reliable secondary sources in order to determine validity. There were several secondary sources available for identifying public libraries in the United States, including the following:

American Library Directory (R.R. Bowker)
Census of Governments (Bureau of the Census)

Public Library Data Service (Public Library Association)
State library directories

Each of these sources was used during the evaluation, along with significant telephone followup to the public libraries themselves and to state library officials affiliated with the Federal State Cooperative System for Public Library Data (the FSCS).[2]

A desirable feature in coverage evaluation via secondary sources is independence. This feature was best met by obtaining directories independently from each state. This avoided problems that would emanate if using centralized secondary sources. For example, review of the American Library Directory (ALD) showed a small but consistent undercount (compared to the NCES dataset) of about eight percent. Attempting to analyze the source of this undercount would have required evaluating the ALD sources and methodology, a project itself.

Using the state library directories as principal reference (secondary) sources also had other advantages:

- They represented a proxy for field work, since the directories were compiled essentially in the field at the state level.

- They provided the best link to the definition of public library that was applied by each state for the NCES census.

The state directories thus were considered the most reliable independent sources. The other secondary sources served as additional references.

The definition of public library used in the 1991 PLS created some problems. It read as follows:

> "an entity that provides all of the following: a) an organized collection of printed or other library materials, or a combination thereof; b) a staff to provide and interpret such materials as required to meet the informational, cultural, recreational, and educational needs of a clientele; c) an established schedule in which services of the staff are available to clientele; and d) the facilities necessary to support such a collection, staff, and schedule. A public library is established under state enabling laws or regulations to serve the residents of a community, district, or region."
>
> "For purposes of the FSCS data collection, however, state law prevails in the identification of a public library and not all states' definitions are the same as the FSCS definition."

The last sentence rendered this definition inadequate from a statistical point of view. It permitted and encouraged state differences in the application of the definition of a public library. It became evident during the evaluation process that the allowance of state flexibility often nullified the rest of the definition and compromised the comparability of data across states.

Therefore, the part of the definition referring to the predominance of the state law was ignored for purposes of the coverage evaluation. The validity of a public library was determined solely by the first four criteria, combined with a requirement of existence during the 1991 time frame. Each entity in the state directories and the state NCES datasets was compared to the first part of the FSCS definition. If the library met the four criteria found in the definition and was verified as existing from two sources, it was considered a public library.

Standardizing the Time Frame

The PLS census year (1991) had some impact upon the coverage evaluation. The secondary sources occasionally referenced a more current year, and in some instances for the states, an earlier year. In verifying the existence or non-existence of a public library contained in a state directory, every effort was made to validate its existence as of the reference year 1991. This included telephone calls where possible. In this manner, the effect of new or discontinued public libraries ("births" and "deaths" in the universe) was minimized as much as possible.

For example, a state report for 1992 contained references to libraries that existed during 1992 in some cases, and 1991 in other cases. Furthermore, it was not certain that the NCES dataset contained information strictly for calendar year 1991. According to the NCES public library publication (*E.D. Tabs - Public Libraries in the United States: 1991*), there were nine different time periods represented by the state submissions. These covered all or parts of three calendar years. Where coverage discrepancies existed between the NCES dataset and the secondary sources, every effort was made to determine whether or not the discrepancy was due to a timing problem as opposed to a coverage problem.

Matching

The first task in the matching operation was to review the state directories for content, and determine which of the entries were valid "public libraries" according to the FSCS definition. Examples of invalid public libraries included university libraries, libraries of private companies, hospital or medical libraries, and the like. None of these belonged in the public library category. In other words, many state library directories

were designed to meet multiple needs, and included not just public libraries but all sorts of public, private, and nonprofit entities that provided reference, reading, or research assistance.

The next task was a two way match of each library in the NCES dataset with each library in the state directories. The match included name and location. This served to identify coverage validity. Mismatches, both state directory-to-NCES and NCES-to-state directory, were then evaluated further for validity using one or some combination of the following procedures:

1. Check against other secondary sources.
2. Telephone followup to individual library entities.
3. Telephone followup to the state coordinator for the public library survey.
4. Referral to state code or statute.

Each mismatch was classified as either a valid or invalid public library, and a determination made as to whether or not it should be included or excluded from the true count of public libraries.

Another task was a comprehensive match between the Census of Governments and the NCES dataset. The former focuses on special districts that comprise independent units of local government. This comprehensive match to the Census of Governments directory was useful because many of the independent special district governments that perform library functions are regional, cooperative, or network entities that do not provide direct library services. Instead, they serve as administrative entities, levying taxes and the like. The Census of Governments was a valuable source of information on these library entities that do not meet the FSCS definitions, but which were sometimes reported as public libraries in the state directories and the NCES dataset.

Calculating Coverage Rates

Two statistics were calculated for each state to measure the accuracy of coverage. First was an aggregate coverage rate, showing the relation of the total count of entries in the NCES dataset to the total number of libraries for the state that met the FSCS public library criteria. The formula was:

$$C_{NCES}/C_{SD} \times 100 = \text{Aggregate Coverage Rate}$$

Where:

C_{NCES} = the total number of libraries contained in the 1991 NCES dataset.

C_{SD} = the final (true) count of public libraries that met the four FSCS criteria described above. These were the libraries contained in the state directory, adjusted as needed for addition of other libraries that met the FSCS criteria for a public library or removal of libraries that did not meet these criteria.

This statistic, expressed in percentage terms, was deemed useful because it quantified the aggregate counts accurately where the NCES dataset contained more entries than there were valid public libraries. Thus it could exceed 100 percent.

A match rate statistic also was calculated, as follows:

$$M_{NCES}/C_{SD} \text{ X } 100 = \text{Match Rate}$$

Where:

M_{NCES} = the number of public libraries in the 1991 NCES dataset that could be matched to a public library in the state directory that meets FSCS criteria.

C_{SD} = the final (true) number of public libraries that met the four FSCS criteria described above. These were the libraries contained in the state directory, adjusted as needed for addition of other libraries that met the FSCS criteria for a public library or removal of libraries that did not meet these criteria.

It, too, was expressed in percentage terms, but unlike the aggegate coverage rate the match rate could not exceed 100 percent.

The denominator was the important term in each rate formula. To reiterate, it was derived from the state directories initially, with adjustments. The adjustment involved either adding to the state count if it was determined that the state directory omitted a valid public library, or reducing that count if it included invalid public libraries that did not fully meet the FSCS criteria for defining a public library.

The initial criteria for identifying a valid public library were the same four contained in the FSCS definition (cited above). Two additional criteria were added, applied as standards to each state. These were intended to clarify and standardize only, based on conflicting conditions encountered in some of the states where treatment based on the FSCS definitions was not clear. The following library entities were included in the count of valid public libraries (the denominator):

1. A library district that was administratively independent from all other public libraries, met all FSCS criteria, but had as its only service facility one or more bookmobiles.

2. A library entity that was administratively independent from all other public libraries, met all FSCS criteria, but served solely as a "mailbox" library for lending materials to the general public. A "mailbox" library is one which has a staff and a collection of books that are mailed to patrons upon a written or telephoned request. There are no walk-in facilities.

The types of library entities below were excluded from the count of public libraries that made up the denominator:

1) Libraries that only provided cooperative services to public libraries, sometimes called system libraries or regional systems.

2) Libraries that were staffed entirely by volunteers. Although "paid staff" was not an explicit part of the 1991 FSCS definition of a "public library," having a paid staff was part of the 1991 definition for the "staff" variable. Therefore, this was an implicit requirement.

3) Library entities that "contracted out" with another public library to provide all their services.

4) Libraries that served exclusively as reference facilities. These were considered special libraries.

COVERAGE RESULTS

Summary

The evaluation examined the PLS program for the purpose of responding to the two basic questions posed at the outset of this paper -- how accurate is the coverage, and are there large numbers of library entities being excluded from the census, resulting in a loss of credibility for the PLS program?

The coverage evaluation revealed the PLS as very comprehensive, with only minor instances of overcounts or undercounts. Table 1 shows the results as measured by the aggregate coverage and match rates.

The aggregate coverage rate for the United States was 99.5 percent. For individual states, the aggregate coverage rates ranged from 87.5 percent to 106.3 percent. The aggregate coverage rate was a measure of the total number of public libraries in the NCES dataset relative to the number of public

libraries contained in the state directories, as adjusted based on FSCS criteria (the true universe of public libraries). It could exceeded 100 percent if the NCES dataset contained an overcount of the number of public libraries. The aggregate coverage rate exceeded 100 percent in six states, was less than 100 percent in 15 states, and equaled 100 percent in the remaining 30 states and the District of Columbia.

The match rate was a measure of the number of public libraries in the NCES dataset that met the FSCS criteria used to define public libraries, relative to the number of public libraries contained in the universe (the state directories, again with adjustments based on FSCS criteria). By definition, the rate could not exceed 100 percent. The match rate for the United States was 98.8 percent. Match rates for individual states ranged from 86.1 percent to 100 percent. The factors that affect coverage issues are described in more detail in the sections below.

The sub-sections that follow describe some of the major factors that affected the coverage rates (the first basic question the addressed by the evaluation). In response to the second basic question posed at the outset, the evaluation found relatively few library entities that were omitted from the PLS census because they failed to meet FSCS criteria. These are discussed below under the sub-section Measuring 'Excluded' Libraries.

State Reporting Requirements Affect Consistency

The most noteworthy state requirements that have a statistical impact on the consistency of coverage can be put into two categories: administration and classification.

Administration:

Annual Report Requirement -- This was a nonresponse problem, and was the largest source of inconsistent coverage among the states. In reporting to the NCES, states relied on the statistics they collected for their own annual reports on library services. There was a direct relationship between nonresponse to the state surveys and undercoverage in the NCES dataset. For example, Alaska did not receive reports from 27 libraries in small villages. Alaska decided, as did other states, to exclude libraries from the NCES dataset if they did not return an annual report to the state library agency.

This was an important issue to note in the PLS statistical program. Nonresponse of this type (unit nonresponse), and the subsequent undercoverage, could be documented in the results for the benefit of the users, since it is generally a measurable quantity.

System Membership -- In some states, a prerequisite for inclusion in the public library statistics was that a local library be a member of the state library system. Inclusion in the state library system was not one of the FSCS criteria and therefore, the Census Bureau's evaluation did not consider membership in the state system a prerequisite. This requirement affected some state directories, and some state reports to the NCES, although the resulting undercounts were small relative to the totals. For example, in Rhode Island two libraries chose not to participate in the state system and were omitted from the NCES dataset. They were included as public libraries for purposes of the evaluation. The evaluation did not attempt to determine reasons for the prerequisite where it existed.

Classification:

Reference or Law Libraries -- These are considered special libraries by the library community and were excluded from both the NCES and true counts of public libraries.

Facilities (Books and Buildings) -- There were several examples for this classification problem. It appeared that the FSCS intention was to exclude bookmobiles from the count of public libraries. The assumption was that bookmobiles were generally operated out of, or as part of, existing public library facilities. However, this was not always the case. In some states (Alabama and Delaware, for example), some rural areas were served strictly by bookmobiles, which were the only "outlets" of the local public library.

Another facility issue was the treatment of "mailbox" libraries. These were library services provided strictly through the mail to rural areas. They existed in a handful of states (Wisconsin, for example) and were almost always included in the count of public libraries reported to the NCES. For statistical purposes, the evaluation results suggested that such entities be included as public libraries as long as they were not double-counted (operated out of an existing public library facility that is open to the public).

Volunteer Libraries -- Classification of volunteer libraries was generally consistent among the states, with such libraries excluded from coverage in the statistics reported to the NCES. The exclusion seems to be based on a "paid staff" criterion. While not explicit in the definition for the 1991 PLS as noted earlier, the criterion has since been introduced.

Regional Systems -- The existence of regional library systems resulted in some coverage problems -- such as double counting. For example, in New York public libraries are linked into 20 library systems for the purpose of providing a variety of additional services to constituents. These library systems were counted as separate public libraries in the NCES dataset, even though each library system consisted of public libraries (and their branches) that were included already in the NCES dataset. The regional systems themselves were not direct and separate providers of library services. The result was overcoverage of public libraries.

Native American or Alaskan Native Village Libraries -- The 1991 NCES library report indicated that "data were not systematically collected from public libraries on Indian reservations." The undercoverage was as much a consequence of nonresponse to the state as it was of definition. The coverage rates for Alaska and Arizona were significantly affected by this issue.

Unit and Item Nonresponse

When a public library did not report to the state, FSCS unit nonresponse procedures called for entering a "-1" for every variable in the library record. Similarly, the state coordinator was to enter a "-1" in a record for any missing individual variable (item nonresponse). The *Report on Coverage Evaluation* found each of these conditions was inconsistently applied in the PLS program.

Unit Nonresponse:

Five states used the "-1" mechanism for handling unit nonresponse. Forty-five states and the District of Columbia did not rigorously use this mechanism to handle unit nonresponse or had no need to use it because of complete coverage. It was clear that some states omitted from the NCES dataset any public library that did not send in a report, rather than enter "-1" for each of its variables. This differential handling of unit nonresponse caused an undercoverage bias in the NCES dataset.

The *Report on Coverage Evaluation* noted that consistent state use of "-1" for unit nonresponse would be a first step in moving toward the development of a public library directory. An additional finding suggested having a separate variable to indicate whether or not the library responded. This would help eliminate undercoverage, and create the potential for applying further statistical techniques, such as imputation, to the PLS.

Item Nonresponse:

There were two findings about the item nonresponse procedure.

First, the use of "-1" for item nonresponse resulted in variables being undercounted. For example, the counts of central or branch libraries should have been higher than the totals derived from aggregation within the dataset.

Second, the effect of the "-1" on unit and item nonresponse should be described more fully in the NCES publication (*E.D. Tabs*). It contained a reference to nonresponse in a footnote to the tables, which stated: "Totals are underestimates if the response rate is less than 100 percent." There were two problems with this statement. In context, it referred only to a single variable (the legal service area statistic), whereas it should refer to every statistic. More importantly, the reader did not know which states and which variables were under reported.

Other Findings

The *Report on Coverage Evaluation* contained several recommendations based upon other findings with regard to the PLS program. Among the key ones were:

1. Resolving the state reporting requirement differences would improve coverage in the PLS. In most cases, resolution would not require any significant changes to procedure or additions to cost. Therefore, it would be worthwhile to make the improvements despite the findings of excellent coverage rates in place already.

2. The FSCS should clarify its position on selected types of public libraries that are being treated inconsistently among the states. This was an issue of standardizing definitions.

3. One important statistical issue to be resolved was that of the time period covered by the annual report. All or parts of three calendar years were represented in the 1991 statistics. With respect to coverage, no standard reference date was specified for the public library directory frame. A review of the 1990 NCES dataset revealed the related problem that some of the state reporting periods had changed between 1990 and 1991.

4. The PLS would benefit from the inclusion of additional information about the structure and organization of public libraries in each state. As a statistical program, the PLS did not contain a comprehensive description of the universe being covered.

For example, California had 168 public libraries, compared to over 700 in New York. In fact, 19 states had more public libraries than does California. These included the relatively smaller states of Connecticut, Maine, and New Hampshire. Since differences in the number of public

libraries do not necessarily equate to differences in services, an explanation of just how public libraries function, and are structured and reported for each state, would be significant.

Measuring 'Excluded' Libraries

Within the coverage issue, the NCES was very curious about the degree of undercoverage that might be resulting from "exclusion." I use this term to refer to the potential undercount associated with respondents that fall outside the scope of the definition. In the case of the PLS, this means operating libraries that provide services to the public but that did not qualify as public libraries according to the four criteria established by the FSCS. Examples include libraries run by volunteers, libraries that receive no state funding and thus are not under any state control, and so forth. As a measure of library service, was the PLS not fulfilling its objective because it intentionally excluded from the census these types of library providers?

The coverage evaluation revealed the answer. As it turned out, there were at most 171 libraries nationally that were intentionally excluded from the library census in 1991 (and presumably a similar number annually). Intentionally excluded refers here to one of two possibilities. These libraries, if they existed, did not meet the four criteria necessary to be classified as public libraries, even though they might provide services to the public. Or, if they met the four criteria, their existence could not be verified, usually because they were small and failed to report to any of the secondary sources. Table 2 shows the 1991 distribution of these library entities by state.

ROLE AND ORDER REVERSAL

Most statistical projects have common sets of characteristics. In the statistical design process, projects begin with the identification of an information need. This is followed by development of data collection methodology and all its component subtasks (ASA, 1980). If the statistical project is a survey as opposed to a census, the next step in the design process is to develop the sample. (This step did not apply to the PLS program.) This is followed by the actual data collection, analysis of results and their accuracy, and release of the results.

With respect to the annual PLS, the order of events in the development of the data collection methodology did not follow commonly accepted design processes. The order was founded in pragmatism, and its consequence was a highly successful statistical project. An explanation is in order.

The statistical need had been well documented (Task Force on a Federal-State Cooperative System for Public Library Data, 1989). It led to the creation of the FSCS, a partnership among the states, the Federal government (represented by the NCES), and the U. S. National Commission on Library and Information Science (NCLIS). The NCES took the lead role as data collection manager. Now at that point, usual procedure would have put NCES staff to work identifying a universe of respondents, identifying and defining variables to collect from each respondent, designing a data collection process (including edit and tabulation standards), designing forms, and so forth.

What occurred, however, was slightly different. In summary, it started with creation of the FSCS. Established in the late 1980s, this was comprised of the NCES, NCLIS, state representatives, and representatives from the American Library Association. The FSCS became the central decision making body for the PLS program.

The states already were in the business of collecting data on their own public libraries, so there was no reason to make any changes. Consideration was never strongly given to having the NCES conduct its own, new census or survey of local public libraries.

In this manner, the PLS program began. The participants recognized that not all the data collected would be consistent in definition or units measured, as evidenced by the official definition of public library. Nevertheless, the philosophical approach was that small imperfections would be resolved in the long-term. After all, each participant had a stake in the success of the statistical program, since they were both data providers and data users. Insofar as the results of the coverage evaluation were concerned, this was proven to be a wise choice.

Not only were the states the basic data collection point (enumerators), the FSCS has gone so far as to involve the states in developing standard edit criteria and in devising new data collection methodologies.

The re-ordering of the data collection methodology fits hand-in-hand with the reversal of roles often associated with statistical programs in which a Federal statistical agency takes part. With respect to the PLS program, the Federal government (through the NCES) is very much a facilitator and sponsor. I think this is a fair characterization. The NCES facilitates FSCS activities by suggesting goals, bringing the state representatives together for regularly scheduled meetings, providing resources to standardize data collection, and seeking outside professional advice about the PLS program. In this sense, the NCES is truly a principal sponsor of the entire PLS program. It is not quite a full manager, and certainly not a micro-manager.

Again, a principal reason for the success of this approach was that the NCES has correctly viewed the states as both data providers and data users. The state participants became partners in the process of managing the PLS program, including defining its content and processing/tabulating much of the data.

PLANNING AND THE EX POST APPLICATION OF STATISTICAL STANDARDS

Now that the PLS program is well established, the NCES is continuing to apply basic statistical standards to the program. These include evaluation and refinement of definitions, updating the data collection technology, and long-term planning for continued interaction among the states, the Federal Government, and the public interest groups.

The forum being used by the NCES for accomplishing this is the FSCS and its subcommittees, such as exist for definitions and data collection. Members are the state representatives to the FSCS, with NCES and public interest group participation. They meet regularly to review the PLS program. There also are outside reviews of the PLS program (such as the Census Bureau's review of coverage).

The most important statistical standard to be addressed is that of definition. The PLS dataset has been in place for several years now, and it is time to set in concrete some of the basics that will ensure a useable time series. Important among these are a set definition of public libraries (and an associated directory of public libraries), and definitions for calculating the various service measures that the FSCS collects.

ADMINISTRATIVE RECORDS

The use of administrative records as information sources is well established in statistics. For the PLS program, administrative records referred to the statistics originating with each state government for purposes of monitoring and controlling the provision of public library services. The state data in turn were from locally-maintained public library records, usually required by the parent government agency such as a city or county.

These public library data were not administrative records in the sense usually thought of by statisticians. This is because one traditional problem area was not encountered - namely the problem of confidentiality. Public libraries are funded and operated as integral parts of a local government. Their activities, including finances and service records, are subject to public review. The avoidance of the confidentiality issue made the PLS much more likely to succeed as a joint program. The other reason local public library data do not constitute traditional administrative records is that they were collected from the

outset with the intent of measuring the very activity covered by the PLS program. For the PLS program, the term administrative records more aptly refers to the FSCS piggybacking its PLS program onto the annual state censuses of their own public libraries.

IS THE PROCESS REPLICABLE?

The PLS experience is an option that could be considered for some (but not all) data collection programs. What are the necessary and sufficient conditions for such a program to succeed? The PLS record suggests the following:

1. Existing set of records and the administrative mechanisms already in place for ensuring that they can be maintained and improved upon. This represents an administrative infrastructure, to borrow a term from the economists. In the case of the PLS, this condition was met by the state library agencies. These were well established, usually on their own but sometimes as part of the state government education hierarchy.

2. A shared information/statistical need. In the PLS, this existed because the states use the public library information to help make funding assistance decisions. The Federal government has this need, if only to a smaller degree.

3. A common data collection method. This was a key role of the NCES in supporting the development of the DECPLUS sofware that has enabled the states to apply identical data collection methods and, as importantly, view the data from a common perspective.

4. Willingness and ability to reach agreement on definitions. This applies equally to the respondents being canvassed and all of the variables being collected.

A condition that is useful, but not absolutely necessary, is the existence of a central organization such as a public interest group, to serve as an third party arbiter, providing objective and professional advice. This role has been assumed both the NCLIS, and the American Library Association, which have been represented in the FSCS activities and committees.

A note of caution also is in order. Cooperative data collection arrangements with the states can have some drawbacks. A comparison exists to the Census Bureau's program for statistics on state and local government finances. This program uses numerous cooperative data collection arrangements with the state governments, similar to what occurs in the PLS. As described by

Wulf (1982), Census Bureau program differs in one significant way from the PLS program. This is that the Census Bureau continues to edit and tabulate the data the states provide. The decision to do this was intentional, based upon the perception that state governments were not neutral in measuring their own local government financial performance. This was viewed as being especially true for data that were being used at a later stage to make inter-state comparisons.

In a sense, the PLS program has evolved beyond that perception of the states. By making the states full partners in the PLS program, the implication is that the states have as much at stake in the pursuit of quality data as do the Federal Government and library public interest groups. That assumption is holding up well so far.

CONCLUSIONS

The excellent coverage of the PLS was attributable directly to the design of the program, with its reliance on individual states for the basic data collection and review.

This same factor that makes coverage so complete, however, was the principal source of inconsistency in the census. The trade-off between method of data collection and the resulting inconsistencies was, on the whole, a worthwhile one.

However, the annual PLS is, in effect, a complete census of public libraries that is not subject to sampling error. The differences in coverage from state-to-state are thus primary sources for the nonsampling error that occurs. These can be "corrected" if improved consistency is a goal for this survey, even though state laws and practices regarding public libraries differ. These differences emanate from the government structure and tradition within each state. This is recognized by the NCES in the PLS publication, as indicated by the last sentence of the definition cited above.

TABLE 1. Public Library Coverage Rates and Counts, By State: 1991

State or area	Number of Public Libraries			Aggregate Coverage Rate (In Percent)	Match Rate (In Percent)
	In Universe-Meet FSCS Criteria	NCES Directory			
		In Dataset	Matched To Universe		
	(1)	(2)	(3)	(4)=(2)/(1)	(5)=(3)/(1)
United States, total	9,092	9,050	8,980	99.5	98.8
Alabama	198	206	197	104.0	99.5
Alaska	89	83	83	93.3	93.3
Arizona	96	89	87	92.7	90.6
Arkansas	36	36	35	100.0	97.2
California	168	168	168	100.0	100.0
Colorado	112	119	112	106.3	100.0
Connecticut	194	194	194	100.0	100.0
Delaware	29	29	29	100.0	100.0
District of Columbia	1	1	1	100.0	100.0
Florida	112	112	109	100.0	97.3
Georgia	53	53	53	100.0	100.0
Hawaii	1	1	1	100.0	100.0
Idaho	107	107	107	100.0	100.0
Illinois	605	602	602	99.5	99.5
Indiana	238	238	237	100.0	99.6
Iowa	523	513	513	98.1	98.1
Kansas	322	338	321	105.0	99.7
Kentucky	116	115	115	99.1	99.1
Louisiana	64	64	64	100.0	100.0
Maine	242	225	224	93.0	92.6
Maryland	24	24	24	100.0	100.0
Massachusetts	374	374	374	100.0	100.0
Michigan	377	377	377	100.0	100.0
Minnesota	133	133	133	100.0	100.0
Mississippi	47	47	47	100.0	100.0
Missouri	152	150	150	98.7	98.7
Montana	82	82	81	100.0	98.8
Nebraska	272	270	269	99.3	98.9
Nevada	26	26	26	100.0	100.0
New Hampshire	230	230	230	100.0	100.0
New Jersey	312	311	311	99.7	99.7
New Mexico	72	63	62	87.5	86.1
New York	741	761	741	102.7	100.0
North Carolina	77	73	73	94.8	94.8
North Dakota	95	91	91	95.8	95.8
Ohio	250	250	250	100.0	100.0
Oklahoma	108	108	108	100.0	100.0
Oregon	124	124	124	100.0	100.0
Pennsylvania	470	448	445	95.3	94.7
Rhode Island	49	51	49	104.1	100.0
South Carolina	40	40	40	100.0	100.0
South Dakota	118	118	118	100.0	100.0
Tennessee	190	190	190	100.0	100.0
Texas	489	482	482	98.6	98.6
Utah	69	70	69	101.4	100.0
Vermont	204	204	204	100.0	100.0
Virginia	90	90	90	100.0	100.0
Washington	70	70	70	100.0	100.0
West Virginia	98	98	98	100.0	100.0
Wisconsin	380	379	379	99.7	99.7
Wyoming	23	23	23	100.0	100.0

Source: Report on Coverage Evaluation of the Public Library Statistics Program, National Center for Education Statistics, 1994.

Definitions: Aggregate coverage rate: NCES dataset/universe of public libraries X 100.
Match rate: Public libraries in NCES dataset matched to Universe/ universe of public libraries X 100.

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TABLE 2. Undercoverage Due to Exclusion: 1991 PLS

State	Potential count of excluded libraries	Percent of total for: Nation	Percent of total for: State
Total	171	1.9	(X)
Alaska	21	0.2	23.6
Arizona	17	0.2	17.7
California	1	0.0	0.6
Colorado	13	0.1	11.6
Illinois	19	0.2	3.1
Maine	8	0.1	3.3
Missouri	7	0.1	4.6
Nebraska	6	0.1	2.2
New Hampshire	3	0.0	1.3
New Jersey	1	0.0	0.3
New Mexico	9	0.1	12.5
Oklahome	2	0.0	1.9
Oregon	11	0.1	8.9
Pennsylvania	25	0.3	5.3
South Dakots	16	0.2	13.6
Texas	12	0.1	2.5

X = Not applicable.
Source: Report on Coverage Evaluation of the Public Library Statistics Program (National Center for Education Statistics)

NOTES

[1] Directories from two sources were identified but not reviewed:

Market Data Retrieval Directory (Market Data Retrieval)
Quality Education Directory (Wilson Marketing)

[2] The FSCS consists of representatives from the state library agencies, the Federal Government, and the U.S National Commission on Libraries and Information Science. Through its various committees and subcommittees, the FSCS coordinates most of the library statistics programs by setting program objectives, defining statistical categories, and standardizing information collection.

REFERENCES

FERBER, ROBERT, SHEATSLEY, PAUL, TURNER, ANTHONY, AND WAKSBERG, JOSEPH [1980], *What Is A Survey?*, American Statistical Association, Subcommittee of the Section on Survey Research Methods, 9 - 15.

NATIONAL CENTER FOR EDUCATION STATISTICS, U.S. DEPARTMENT OF EDUCATION [1994], *Report on Coverage Evaluation of the Public Library Statistics Program*.

NATIONAL CENTER FOR EDUCATION STATISTICS, U.S. DEPARTMENT OF EDUCATION [1993], E.D. Tabs, *Public Libraries in the United States: 1991*

TASK FORCE ON A FEDERAL STATE COOPERATIVE SYSTEM FOR PUBLIC LIBRARY DATA (1989), *An Action Plan for a Federal State Cooperative System for Public Library Data*

WULF, HENRY (1984) "Cooperation: The 'Central Tendency' That Produces Above Average Data," *Proceedings of the Government Statistics Section of the American Statistical Association,*